

BASIS OF PLAN

THIS SITE PLAN IS BASED ON THE ALTA LAND TITLE SURVEY PREPARED BY BARGHAUSEN CONSULTING ENGINEERS, INC. (DATED AUGUST 9, 2022). PROPOSED SITE IMPROVEMENTS WERE PROVIDED BY MACKENZIE ARCHITECTS (DATED 11-30-2023).

Fill out and submit City Engineering Cost Estimate found here during the next submission: https://www.cityofpuallup.org/1591/Master-Document-List#C.[civils, sheet 1]

Cost estimate completed and included with resubmittal package.

SURVEY INFORMATION

TITLE REPORT INFORMATION

TITLE COMMITMENT: ALL TITLE INFORMATION SHOWN ON THIS MAP, INCLUDING APPURTENANT EASEMENTS AND ADJOINING DEEDS FOR UNPLATTED LOTS, IF ANY, HAS BEEN EXTRACTED FROM FIRST AMERICAN TITLE INSURANCE COMPANY ALTA COMMITMENT NO. 1133990-0412, DATED JUNE 3, 2022 AT 7:30 AM.

LEGAL DESCRIPTION (PER ABOVE REFERENCED TITLE REPORT)

PARCEL "A" THAT PORTION OF BLOCKS 34 TO 37, INCLUSIVE, OF REPLAT OF A PART OF FRANK R. SPINNING'S FIRST ADDITION TO THE TOWN OF PUYALLUP, PIERCE COUNTY, WASHINGTON, ACCORDING TO PLAT RECORDED IN BOOK 6 OF PLATS AT PAGE(S) 91, LYING NORTHERLY OF THE NORTHERN PACIFIC RAILWAY COMPANY RIGHT OF WAY, IN PUYALLUP, PIERCE COUNTY, WASHINGTON.

TOGETHER WITH THE SOUTH 30 FEET OF VACATED PIONEER AVENUE ABUTTING BLOCKS 34 AND 35 AS VACATED BY CITY OF PUYALLUP ORDINANCE NO. 211 RECORDED FEBRUARY 14, 1902 UNDER AUDITOR'S NO. 146161.

PARCEL "B" A PARCEL OF LAND SITUATED WITHIN THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 20 NORTH, RANGE 4 EAST OF THE WILLAMETTE MERIDIAN, IN PIERCE COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF BLOCK 33 OF REPLAT OF A PART OF FRANK R. SPINNING'S FIRST ADDITION TO THE TOWN OF PUYALLUP, PIERCE COUNTY, WASHINGTON, ACCORDING TO PLAT RECORDED IN BOOK 6 OF PLATS AT PAGE 91;

PARCEL "C" THAT PORTION OF THE SOUTHEAST OF SECTION 27, TOWNSHIP 20 NORTH, RANGE 4 EAST OF THE WILLAMETTE MERIDIAN, IN PIERCE COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SECTION CORNER COMMON TO SECTIONS 26, 27, 34 AND 35, ALL IN SAID TOWNSHIP 20 NORTH, RANGE 4 EAST;

HORIZONTAL DATUM: NAD 83/11 PER WSDOT PUBLISHED MONUMENTS. WSDOT CONTROL POINT "GP 27512-100" WAS HELD FOR POSITION, AND A LINE BETWEEN SAID POINT "GP 27512-100" AND CONTROL POINT "GP27512-18A2" WAS HELD FOR ROTATION, BEING SOUTH 38°23'07" WEST.

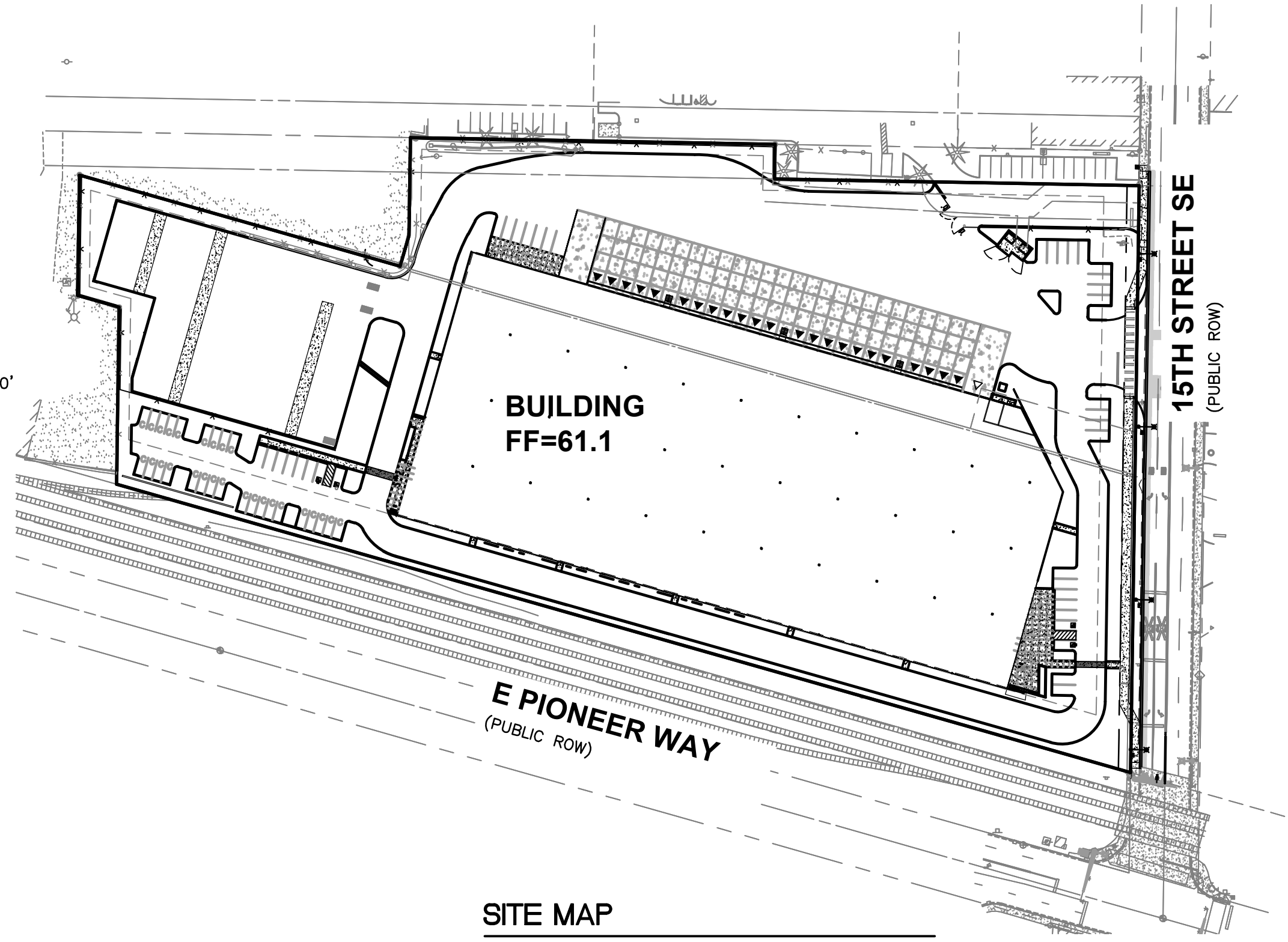
VERTICAL DATUM: NAVD88 VERTICAL CONTROL PUBLISHED BY WSDOT, POINT "GP 27512-100" WAS HELD FOR ELEVATION. BENCHMARK ELEVATION = 81.27'

SITE BENCHMARK: SET MAGNAIL & WASHER #49 IN THE SIDEWALK ON THE WEST SIDE OF 15TH STREET S.E. ELEVATION =55.16' (NAVD 88)

SOILS REPORT NOTES

- 1. THE FOLLOWING SOILS REPORTS/ASSESSMENTS WERE PREPARED FOR THE SITE: GEOTECHNICAL REPORT, PROJECT NO. T-8661 DATED: JAN 12TH 2022; 240 - 15TH STREET SE INDUSTRIAL; 240 - 15TH STREET SE PUYALLUP, WASHINGTON; PREPARED BY: TERRA ASSOCIATES, INC. 12220 113TH AVENUE NE, STE. 130 KIRKLAND, WASHINGTON 98034

COVER SHEET CIVIL PLANS



SITE MAP 1"=100'

INDEX OF SHEETS: CIVIL SET

- C1 COVER SHEET; C2 CONSTRUCTION NOTES; C3 CIVIL TESC AND DEMOLITION PLAN; C4 SITE PLAN; C5 SITE PLAN; C6 SITE PLAN; C7 GRADING AND STORM DRAINAGE PLAN; C8 GRADING AND STORM DRAINAGE PLAN; C9 GRADING AND STORM DRAINAGE PLAN; C10 GRADING DETAILS; C11 GRADING DETAILS; C12 VAULT DETAILS; C13 VAULT DETAILS; C14 WATER AND SANITARY SEWER PLAN; C15 WATER AND SANITARY SEWER PLAN; C16 WATER AND SANITARY SEWER PLAN; C17 RIGHT-OF-WAY DEMOLITION PLAN; C18 FRONTAGE IMPROVEMENT PLAN; C19 CHANNELIZATION PLAN; C20 SITE SECTIONS; C21 EROSION CONTROL DETAILS; C22 EROSION CONTROL DETAILS; C23 CONSTRUCTION DETAILS; C24 CONSTRUCTION DETAILS; C25 CONSTRUCTION DETAILS; C26 CONSTRUCTION DETAILS; C27 CONSTRUCTION DETAILS; C28 CONSTRUCTION DETAILS; C29 CONSTRUCTION DETAILS; C30 CONSTRUCTION DETAILS; C31 CONSTRUCTION DETAILS; C32 CONSTRUCTION DETAILS; C33 CITY NOTES; C34 FIRE LANE MARKING PLAN

ILLUMINATION SET

- 1 ILLUMINATION PLAN; 2 ILLUMINATION DETAILS

LANDSCAPE SET

- L0.01 LANDSCAPE GENERAL INFORMATION; L1.10 PLANTING PLAN EAST; L1.11 PLANTING PLAN CENTRAL; L1.12 PLANTING PLAN WEST; L1.20 MATERIALS AND LAYOUT PLAN; L5.10 SITE DETAILS; L5.11 SOIL DETAILS; L5.12 IRRIGATION DETAILS; L5.13 PLANTING DETAILS; L5.14 STREET PLANTING DETAILS

UTILITY CONFLICT NOTE: CAUTION: THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES... WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES PUBLIC LAND SURVEY OFFICE 801 88th AVE S.E. OLYMPIA, WASHINGTON 98501-7019

TAX PARCEL NUMBERS

7845000161, 7845000170, 0420274126

ZONING

ML - LIMITED MANUFACTURING

OWNER/APPLICANT

CREF3 PUYALLUP OWNER LLC 11611 SAN VICENTE BLVD, 10TH FLOOR LOS ANGELES, CA 90049

CIVIL ENGINEERING CONSULTANT:

BARGHAUSEN CONSULTING ENGINEERS 18215 72ND AVENUE SOUTH KENT, WA 98032 (425) 251-6222 (425) 251-8782 (FAX) JASON HUBBELL EMAIL: jhubbell@barghausen.com

SITE SURVEY CONSULTANT:

BARGHAUSEN CONSULTING ENGINEERS 18215 72ND AVENUE SOUTH KENT, WA 98032 (425) 251-6222 (425) 251-8782 (FAX) RYAN LEE

PROJECT INFO:

TOTAL SITE AREA= 346,555 SF TOTAL IMPERVIOUS AREA= 289,069 SF (83.4%) TOTAL PERVIOUS AREA= 57,486 SF (16.6%)

UTILITIES/SERVICES

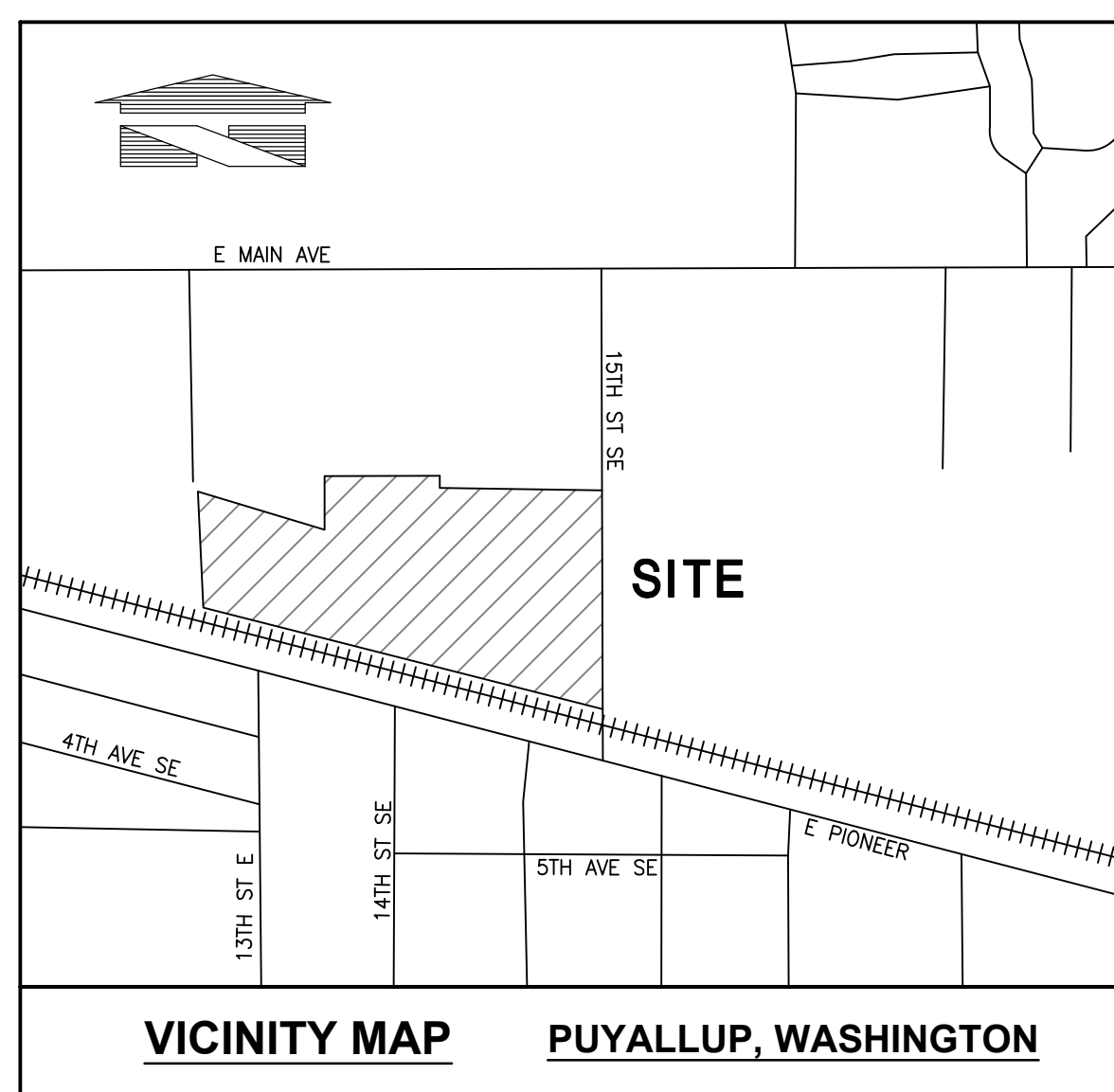
STORM/SEWER/WATER: CITY OF PUYALLUP WATER DIVISION 1100 39TH AVE. SE PUYALLUP, WA 98374 (253) 841-5505; POWER: PUGET SOUND ENERGY 8001 SOUTH 212TH STREET KENT, WA 98032 (253) 395-7065

ESTIMATED EARTHWORK VOLUMES:

(FOR PERMITTING ONLY. NOT FOR BID PURPOSES) EARTHWORK, STRIPPING EXPORT = 0 ON-SITE CUT = 7,000 CY ON-SITE FILL = 7,000 CY EARTHWORK, STRUCTURAL IMPORT = 000 CY

HORIZONTAL CONTROL / SURVEY NOTE:

- 1. CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL AND VERTICAL CONTROL FOR ALL NEW IMPROVEMENTS. CONTRACTOR SHALL CONTACT BARGHAUSEN CONSULTING ENGINEERS, INC. TO OBTAIN ELECTRONIC CAD FILES FOR STAKING PURPOSES. 2. UNDERGROUND UTILITIES AND FEATURES DEPICTED HEREON ARE BASED ON FIELD OBSERVATION, MARKINGS, DEVELOPMENT PLANS, AND/OR BEST AVAILABLE RECORD DOCUMENTS ONLY.



VICINITY MAP PUYALLUP, WASHINGTON

SITE ADDRESS

240 15TH STREET SE PUYALLUP, WA 98372

COVER SHEET CIVIL PLANS FORTRESS - PUYALLUP

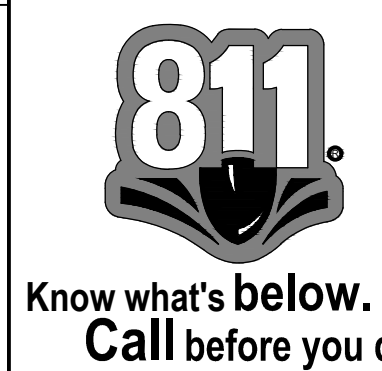
CREF3 PUYALLUP OWNER LLC 11611 SAN VICENTE BLVD 10TH FLOOR LOS ANGELES, CA 90049

Professional Engineer Seal for Jason Guy Hubbell, State of Washington, No. 38860, Registered Professional Engineer, 3/05/2024

Scale: Horizontal 1"=100' Vertical N/A

Barghausen Consulting Engineers, Inc. 18215 72nd Avenue South Kent WA 98032 425.251.6222 barghausen.com

Job Number 22085 Sheet C1 of 34



APPROVED BY CITY OF PUYALLUP DEVELOPMENT ENGINEERING DATE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

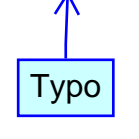
# NOTES AND LEGEND

## GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
2. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR SHOWN ON RECORD DRAWING PROVIDED BY OTHERS ARE SHOWN HEREON. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE SUBJECT TO A DEGREE OF UNKNOWN VARIATION. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. BARGHAUSEN CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR RECORDS OF OTHERS. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
6. INSPECTION OF SITE WORK WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE GOVERNING JURISDICTION. INSPECTION OF PRIVATE FACILITIES WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF BACKFILLING ALL CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY THE CONTRACTOR SHALL CONTACT THE AGENCY AND/OR UTILITY INSPECTION PERSONNEL AND ARRANGE ANY REQUIRED PRE-CONSTRUCTION MEETING(S). CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM ADVANCE NOTIFICATION TO OWNER, FIELD ENGINEER AND ENGINEER OF PRE-CONSTRUCTION MEETINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR WORKER AND SITE SAFETY AND SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED.
10. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL ADJACENT PUBLIC AND PRIVATE PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITY SERVICES THAT ARE TO REMAIN OPERATIONAL WITHIN THE CONSTRUCTION AREA WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
11. TWO (2) COPIES OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. ONE (1) SET WITH RECORDS OF AS-BUILT INFORMATION SHALL BE SUBMITTED TO BARGHAUSEN CONSULTING ENGINEERS, INC. AT COMPLETION OF PROJECT.
12. CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL CONTROL FOR ALL NEW IMPROVEMENTS. STAKING CONTROL SHALL BE TAKEN FROM ELECTRONIC PLAN FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC.
13. CONTRACTOR SHALL REQUEST FROM BARGHAUSEN CONSULTING ENGINEERS, INC., PRIOR TO ANY CONSTRUCTION STAKING OR CONSTRUCTION WORK, A FORMAL CONSTRUCTION RELEASE PLAN SET OR SPECIFIC RELEASE IN WRITING. THE APPROVED AGENCY PERMIT DRAWINGS WILL NOT BE CONSIDERED CONSTRUCTION RELEASE PLANS BY BARGHAUSEN CONSULTING ENGINEERS, INC. UNLESS BARGHAUSEN CONSULTING ENGINEERS, INC. HAS GIVEN A FORMAL WRITTEN RELEASE OR ISSUED A CONSTRUCTION RELEASE PLAN SET.

### CONSTRUCTION SEQUENCE

1. HOLD A PRECONSTRUCTION MEETING WITH THE CITY AND OBTAIN REQUIRED PERMITS.
2. INSPECT AND MAINTAIN TEMPORARY CONSTRUCTION ENTRANCE.
3. INSPECT AND MAINTAIN PERIMETER DITCHES, SILT FENCES, AND OTHER EROSION CONTROL DEVICES AS SHOWN.
4. INSPECT AND MAINTAIN PROTECTION DEVICES FOR CRITICAL AREAS AND SIGNIFICANT TREES.
5. SCHEDULE AN EROSION CONTROL INSPECTION WITH THE CITY.
6. CONSTRUCT STORM DRAINAGE RETENTION/DETENTION (CONTROL AND STORAGE) FACILITIES. PROVIDE EMERGENCY OVERFLOW AS APPLICABLE.
7. ALL DITCHES AND SWALES AS SHOWN SHALL BE PROVIDED TO DIRECT ALL SURFACE WATER TO THE RETENTION/DETENTION AND SEDIMENTATION POND AS CLEARING AND GRADING PROGRESSES. NO UNCONTROLLED SURFACE WATER SHALL BE ALLOWED TO LEAVE THE SITE OR BE DISCHARGED TO A CRITICAL AREA AT ANY TIME DURING THE GRADING OPERATIONS.
9. GRADE SITE AND INSTALL UTILITIES PER PLANS.
10. INSTALL LANDSCAPING AND PAVING
11. INSPECT AND MAINTAIN ALL BMP'S UNTIL SIRE IS STABILIZED



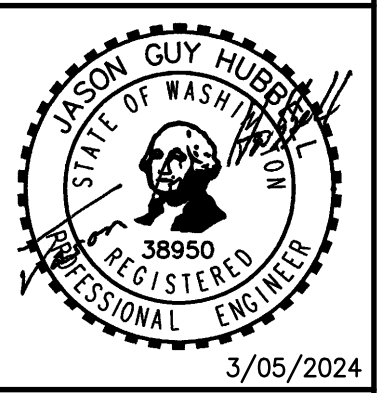
revised as noted

LEGEND:	
EXISTING TYPE II CATCH BASIN	
EXISTING TYPE I CATCH BASIN	
PROPOSED TYPE II CATCH BASIN	
PROPOSED TYPE I CATCH BASIN	
EXISTING TYPE II CATCH BASIN	
EXISTING TYPE I CATCH BASIN	
PROPOSED STORM DRAINAGE LINE	
EXISTING STORM DRAINAGE LINE	
PROPOSED SANITARY SEWER LINE	
PROPOSED SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER LINE	
EXISTING WATERMAIN	
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	
PROPOSED WATERMAIN	
PROPOSED FIRE HYDRANT	
PROPOSED WATER VALVE	
PROPOSED SPOT ELEVATIONS	
EXISTING SPOT ELEVATIONS	
EXISTING STREET LIGHT	
EXISTING SIGN	
EXISTING CONTOURS	
PROPOSED CONTOURS	
PROPOSED ASPHALT PAVEMENT	
PROPOSED CONCRETE	

No.	Date	By	Chd.	Appr.	Revision
2	03/05/24	DL	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
	02/27/24	DL	DL	JSG	BID SET
1	12/06/23	DL	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title: **NOTES AND LEGEND**  
**FORTRESS - PUYALLUP**

For: **CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Scale:	Horizontal	Vertical
	NA	N/A
Designed	DL	
Drawn	RDC	
Checked	DL	
Approved	JGH	
Date	8/23/23	

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
[barghausen.com](http://barghausen.com)

**APPROVED**

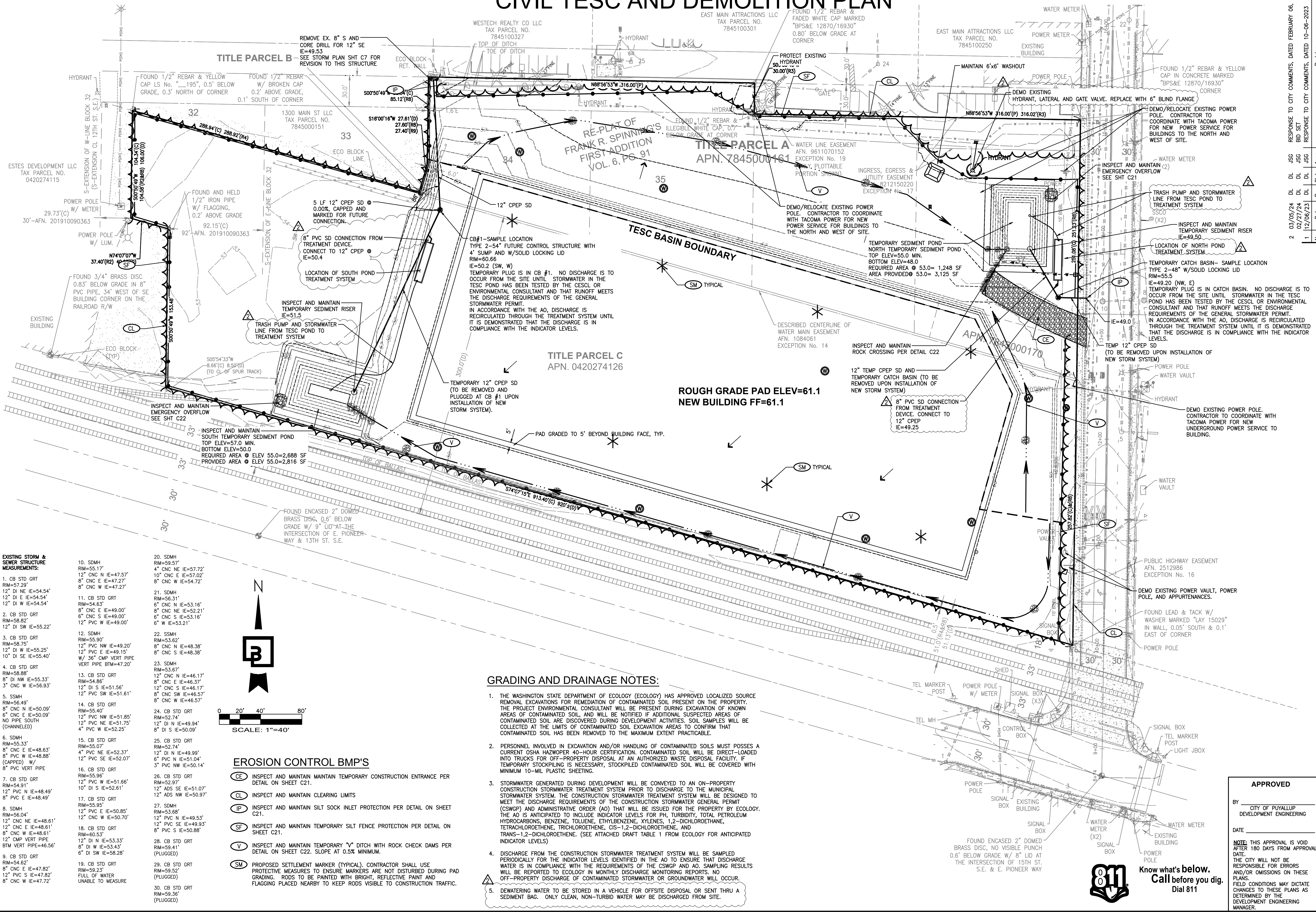
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

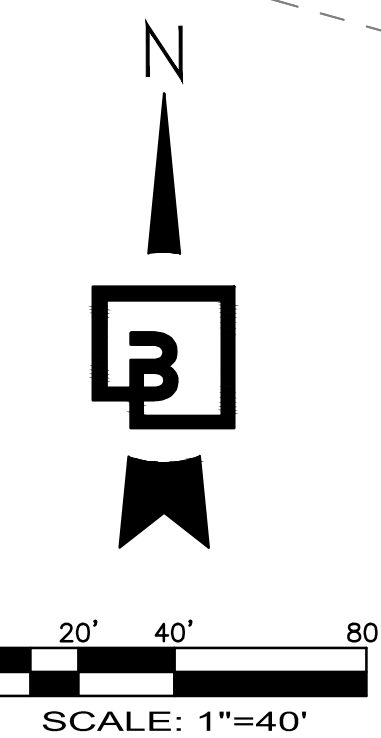
Job Number: **22085**  
Sheet: **C2** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**CIVIL TESC AND DEMOLITION PLAN**



**EXISTING STORM & SEWER STRUCTURE MEASUREMENTS:**

1. CB STD GRT RIM=57.29 12" DI NE IE=54.54' 12" DI E IE=54.54' 12" DI W IE=54.54'	2. CB STD GRT RIM=58.82 12" DI SW IE=55.22'	3. CB STD GRT RIM=58.75 12" DI W IE=55.25' 10" DI SE IE=55.40'	4. CB STD GRT RIM=58.88 8" DI NW IE=55.33' 3" CNC W IE=56.93'	5. SSMH RIM=56.49 8" CNC N IE=50.09' 6" CNC E IE=50.09' NO PIPE SOUTH (CHANNLED)	6. SDMH RIM=55.33 8" CNC E IE=48.63' 8" PVC W IE=48.88' (CAPPED) W/ 8" PVC VERT PIPE	7. CB STD GRT RIM=54.91 12" PVC N IE=48.49' 8" PVC E IE=48.49'	8. SDMH RIM=56.04 12" CNC NE IE=48.61' 12" CNC E IE=48.61' 12" CNC W IE=48.61' 12" CMP VERT PIPE BTM VERT PIPE=46.56'	9. CB STD GRT RIM=54.62 8" CNC E IE=47.82' 12" PVC S IE=47.82' 8" CNC W IE=47.72'	10. SDMH RIM=55.17 12" CNC N IE=47.57' 8" CNC E IE=47.27' 8" CNC W IE=47.27'	11. CB STD GRT RIM=54.63 8" CNC E IE=49.00' 6" CNC S IE=49.00' 12" PVC W IE=49.00'	12. SDMH RIM=55.90 12" PVC NW IE=49.20' 12" PVC E IE=49.15' W/ 36" CMP VERT PIPE VERT PIPE BTM=47.20'	13. CB STD GRT RIM=54.86 12" DI S IE=51.56' 12" PVC SW IE=51.61'	14. CB STD GRT RIM=55.40 12" PVC NW IE=51.85' 12" PVC NE IE=51.75' 4" PVC W IE=52.25'	15. CB STD GRT RIM=54.91 4" PVC NE IE=52.37' 12" PVC SE IE=52.07'	16. CB STD GRT RIM=55.96 12" PVC W IE=51.66' 10" DI S IE=52.61'	17. CB STD GRT RIM=55.95 12" PVC E IE=50.75' 12" CNC W IE=50.70'	18. CB STD GRT RIM=60.53 12" DI N IE=53.33' 8" DI W IE=53.43' 6" DI SW IE=58.28'	19. CB STD GRT RIM=59.23 8" CNC E IE=47.82' 12" PVC S IE=47.82' 8" CNC W IE=47.72'	20. SDMH RIM=59.57 4" CNC NE IE=57.72' 10" CNC E IE=57.02' 8" CNC W IE=54.72'	21. SDMH RIM=56.31 6" CNC N IE=53.16' 8" CNC NE IE=52.21' 6" CNC S IE=53.16' 6" W IE=53.21'	22. SSMH RIM=53.62 8" CNC N IE=48.38' 8" CNC S IE=48.38'	23. SDMH RIM=53.67 12" CNC N IE=46.17' 8" CNC E IE=46.37' 12" CNC S IE=46.17' 8" CNC SW IE=46.57' 8" CNC W IE=46.57'	24. CB STD GRT RIM=52.74 12" DI N IE=49.94' 8" DI S IE=50.09'	25. CB STD GRT RIM=52.74 12" DI N IE=49.99' 6" PVC N IE=51.04' 3" PVC NW IE=50.14'	26. CB STD GRT RIM=52.97 12" ADS SE IE=51.07' 12" ADS NW IE=50.97'	27. SDMH RIM=53.68 12" PVC N IE=49.53' 12" PVC SE IE=49.93' 8" PVC S IE=50.88'	28. CB STD GRT RIM=59.41 (PLUGGED)	29. CB STD GRT RIM=59.52 (PLUGGED)	30. CB STD GRT RIM=59.35 (PLUGGED)
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**EROSION CONTROL BMP'S**

(CE) INSPECT AND MAINTAIN TEMPORARY CONSTRUCTION ENTRANCE PER DETAIL ON SHEET C21.
(CL) INSPECT AND MAINTAIN CLEARING LIMITS
(IP) INSPECT AND MAINTAIN SILT SOCK INLET PROTECTION PER DETAIL ON SHEET C21.
(SF) INSPECT AND MAINTAIN TEMPORARY SILT FENCE PROTECTION PER DETAIL ON SHEET C21.
(V) INSPECT AND MAINTAIN TEMPORARY "V" DITCH WITH ROCK CHECK DAMS PER DETAIL ON SHEET C22. SLOPE AT 0.5% MINIMUM.
(SM) PROPOSED SETTLEMENT MARKER (TYPICAL). CONTRACTOR SHALL USE PROTECTIVE MEASURES TO ENSURE MARKERS ARE NOT DISTURBED DURING PAD GRADING. RODS TO BE PAINTED WITH BRIGHT, REFLECTIVE PAINT AND FLAGGING PLACED NEARBY TO KEEP RODS VISIBLE TO CONSTRUCTION TRAFFIC.

- GRADING AND DRAINAGE NOTES:**
- THE WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY) HAS APPROVED LOCALIZED SOURCE REMOVAL EXCAVATIONS FOR REMEDIATION OF CONTAMINATED SOIL PRESENT ON THE PROPERTY. THE PROJECT ENVIRONMENTAL CONSULTANT WILL BE PRESENT DURING EXCAVATION OF KNOWN AREAS OF CONTAMINATED SOIL AND WILL BE NOTIFIED IF ADDITIONAL SUSPECTED AREAS OF CONTAMINATED SOIL ARE DISCOVERED DURING DEVELOPMENT ACTIVITIES. SOIL SAMPLES WILL BE COLLECTED AT THE LIMITS OF CONTAMINATED SOIL EXCAVATION AREAS TO CONFIRM THAT CONTAMINATED SOIL HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
  - PERSONNEL INVOLVED IN EXCAVATION AND/OR HANDLING OF CONTAMINATED SOILS MUST POSSESS A CURRENT OSHA HAZWOPER 40-HOUR CERTIFICATION. CONTAMINATED SOIL WILL BE DIRECT-LOADED INTO TRUCKS FOR OFF-PROPERTY DISPOSAL AT AN AUTHORIZED WASTE DISPOSAL FACILITY. IF TEMPORARY STOCKPILING IS NECESSARY, STOCKPILED CONTAMINATED SOIL WILL BE COVERED WITH MINIMUM 10-MIL PLASTIC SHEETING.
  - STORMWATER GENERATED DURING DEVELOPMENT WILL BE CONVEYED TO AN ON-PROPERTY CONSTRUCTION STORMWATER TREATMENT SYSTEM PRIOR TO DISCHARGE TO THE MUNICIPAL STORMWATER SYSTEM. THE CONSTRUCTION STORMWATER TREATMENT SYSTEM WILL BE DESIGNED TO MEET THE DISCHARGE REQUIREMENTS OF THE CONSTRUCTION STORMWATER GENERAL PERMIT (CSWGP) AND ADMINISTRATIVE ORDER (AO) THAT WILL BE ISSUED FOR THE PROPERTY BY ECOLOGY. THE AO IS ANTICIPATED TO INCLUDE INDICATOR LEVELS FOR PH, TURBIDITY, TOTAL PETROLEUM HYDROCARBONS, BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, 1,2-DICHLOROETHANE, TETRACHLOROETHENE, TRICHLOROETHENE, CIS-1,2-DICHLOROETHENE, AND TRANS-1,2-DICHLOROETHENE. (SEE ATTACHED DRAFT TABLE 1 FROM ECOLOGY FOR ANTICIPATED INDICATOR LEVELS)
  - DISCHARGE FROM THE CONSTRUCTION STORMWATER TREATMENT SYSTEM WILL BE SAMPLED PERIODICALLY FOR THE INDICATOR LEVELS IDENTIFIED IN THE AO TO ENSURE THAT DISCHARGE WATER IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE CSWGP AND AO. SAMPLING RESULTS WILL BE REPORTED TO ECOLOGY IN MONTHLY DISCHARGE MONITORING REPORTS. NO OFF-PROPERTY DISCHARGE OF CONTAMINATED STORMWATER OR GROUNDWATER WILL OCCUR.
  - DEWATERING WATER TO BE STORED IN A VEHICLE FOR OFFSITE DISPOSAL OR SENT THRU A SEDIMENT BAG. ONLY CLEAN, NON-TURBID WATER MAY BE DISCHARGED FROM SITE.

**FOR:** CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**Scale:**  
Horizontal 1"=40'  
Vertical N/A

**Designed** DL  
**Drawn** RDC  
**Checked** DL  
**Approved** JGH  
**Date** 6/23/23

**APPROVED**

BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

**Job Number** 22085  
**Sheet** C3 of 34

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Kent, WA 98032  
425.251.6222  
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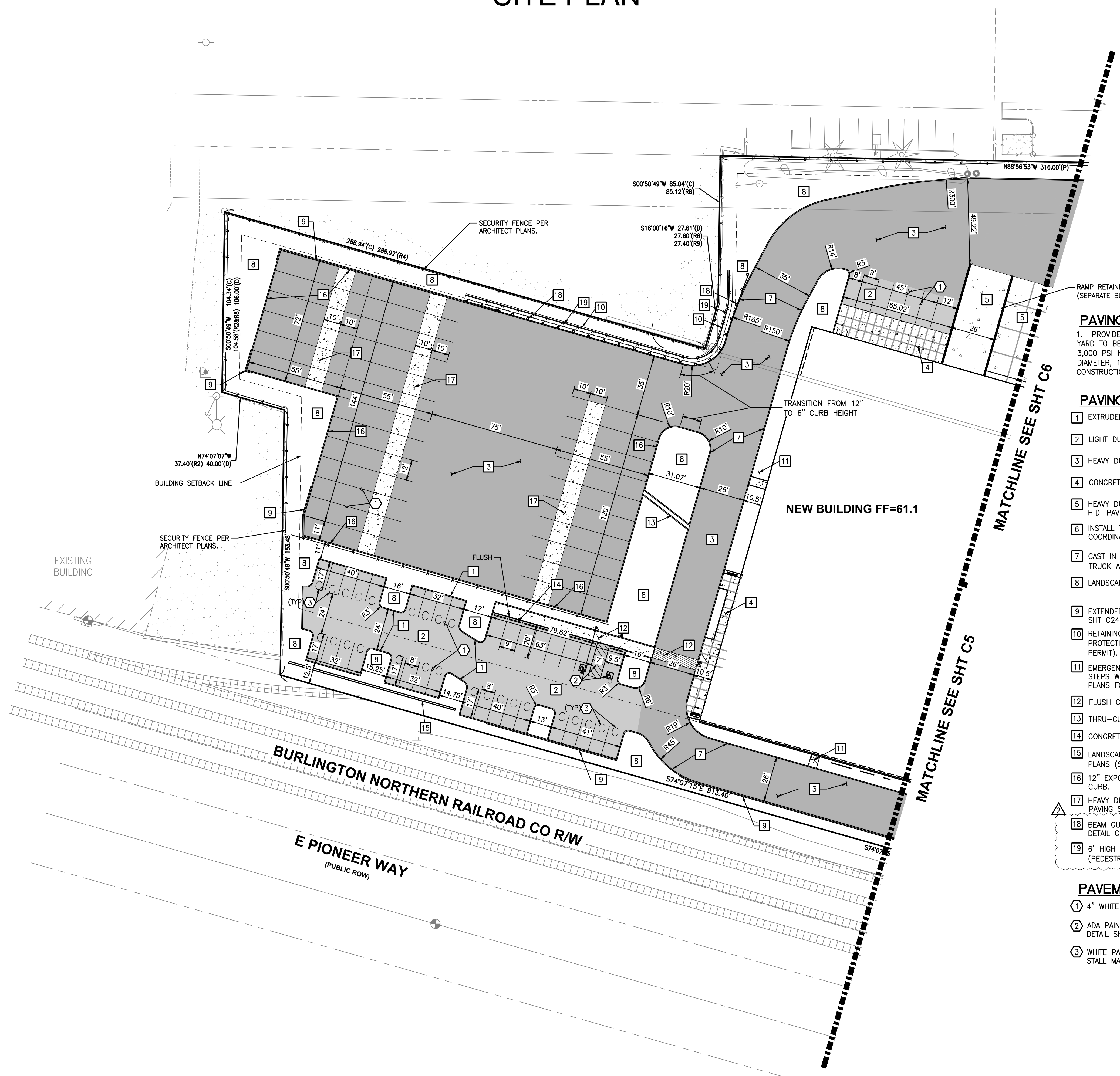
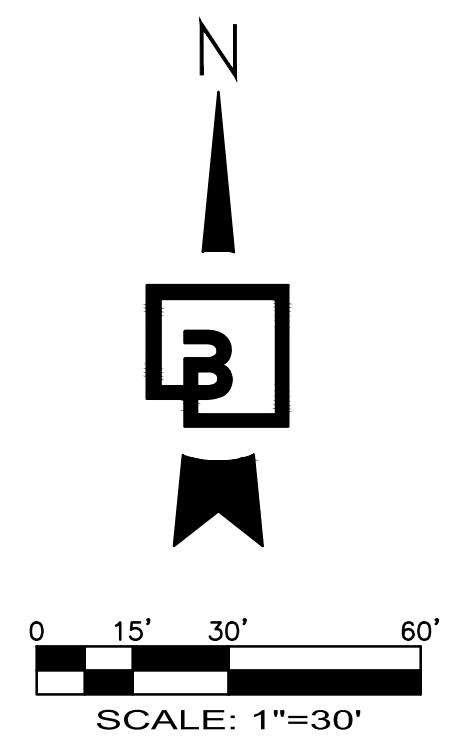
**Professional Engineer**  
JASON GUY HUBBARD  
38850  
REGISTRATION NO. 38850  
3/05/2024

**Revision**

2	03/05/24	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	12/27/24	DL	JSG	BID SET
1	12/06/23	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

**Title:** CIVIL TESC AND DEMOLITION PLAN  
**Fortress - Puyallup**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**SITE PLAN**



**PAVING NOTES:**

1. PROVIDE BID ALTERNATE FOR THE ENTIRE TRUCK YARD TO BE CONCRETE - CONSISTING OF 7" THICK, 3,000 PSI NON-REINFORCED CONCRETE WITH 3/4" DIAMETER, 18" LONG SMOOTH DOWELS AT 12" O.C. AT CONSTRUCTION JOINTS FOR THE ENTIRE TRUCK YARD.

**PAVING PLAN SCHEDULE:**

- 1 EXTRUDED CONCRETE CURB PER DETAIL SHT C24
- 2 LIGHT DUTY HMA PAVING PER SECTION SHT C24
- 3 HEAVY DUTY HMA PAVING PER SECTION SHT C24
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- 11 EMERGENCY ACCESS CONCRETE LANDING (5'x5') WITH STEPS WHERE NECESSARY, TYPICAL. SEE GRADING PLANS FOR STEP LOCATION
- 12 FLUSH CONCRETE WALK PER DETAIL SHT C24
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- 19 6" HIGH BLACK VINYL COATED CHAINLINK FENCE (PEDESTRIAN FALL PROTECTION)

What set of Geotech plans is this referring to? (civils, pg 4)

callout revised to reflect actual wall design (separate building permit)

**PAVEMENT MARKING SCHEDULE:**

- 1 4" WHITE PAINTED PARKING STRIPE, TYPICAL.
- 2 ADA PAINTED PARKING AND ACCESS STALL PER DETAIL SHT C24
- 3 WHITE PAINTED "COMPACT" VEHICLE PARKING STALL MARKINGS, TYPICAL.

**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.



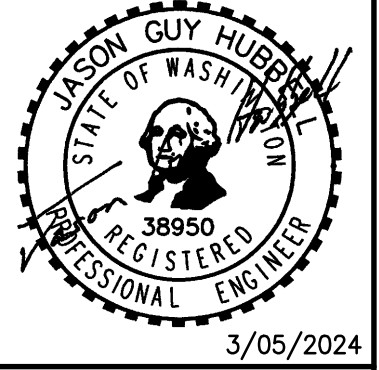
Know what's below.  
Call before you dig.  
Dial 811

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	JSG	DL
		DL	JSG	DL
1	12/06/23	DL	JSG	DL

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title: **SITE PLAN**

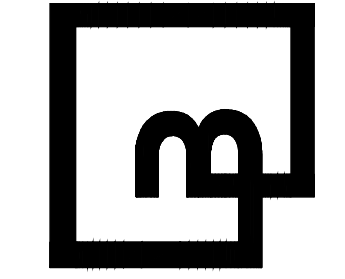
For: **CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Designee	Drawn	RDC	DL	DL	Date
					8/23/23

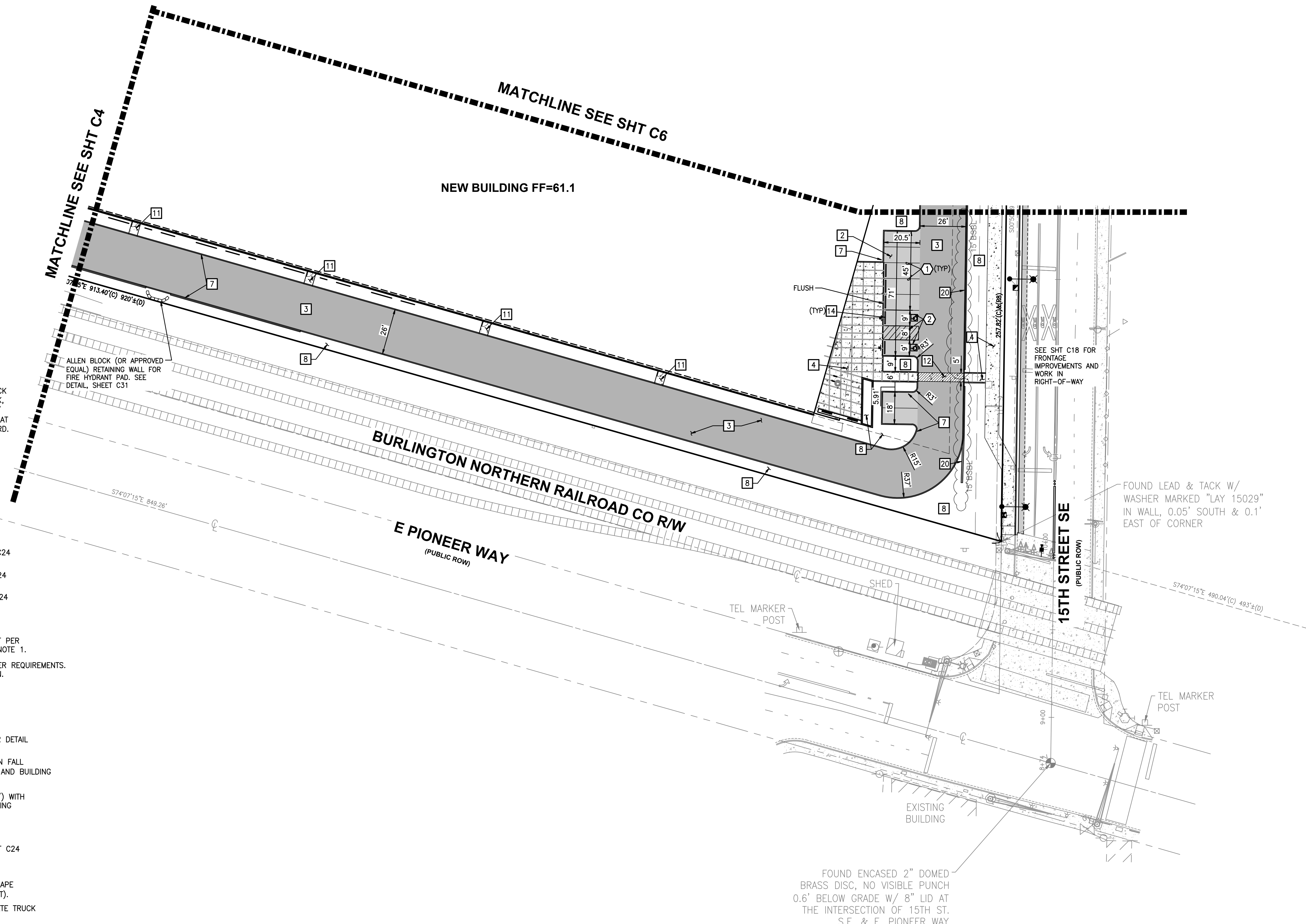
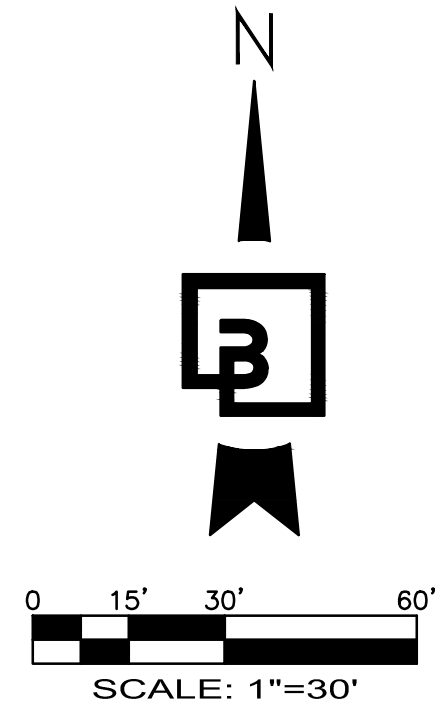
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425.251.6222 [barghausen.com](http://barghausen.com)



Job Number: **22085**  
Sheet: **C4** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**SITE PLAN**



**PAVING NOTES:**  
1. PROVIDE BID ALTERNATE FOR THE ENTIRE TRUCK YARD TO BE CONCRETE - CONSISTING OF 7" THICK, 3,000 PSI NON-REINFORCED CONCRETE WITH 3/4" DIAMETER, 18" LONG SMOOTH DOWELS AT 12" O.C. AT CONSTRUCTION JOINTS FOR THE ENTIRE TRUCK YARD.

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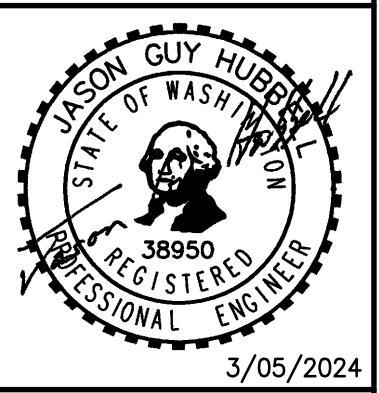
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	02/27/24	DL	JSG	BID SET
1	12/06/23	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023
No.	Date	By	Chd.	Appr.

Title: **SITE PLAN**

For: **CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049**



Scale:	Horizontal	Vertical
	1"=30'	N/A
Designed	DL	
Drawn	RDC	
Checked	DL	
Approved	JGH	
Date	8/23/23	

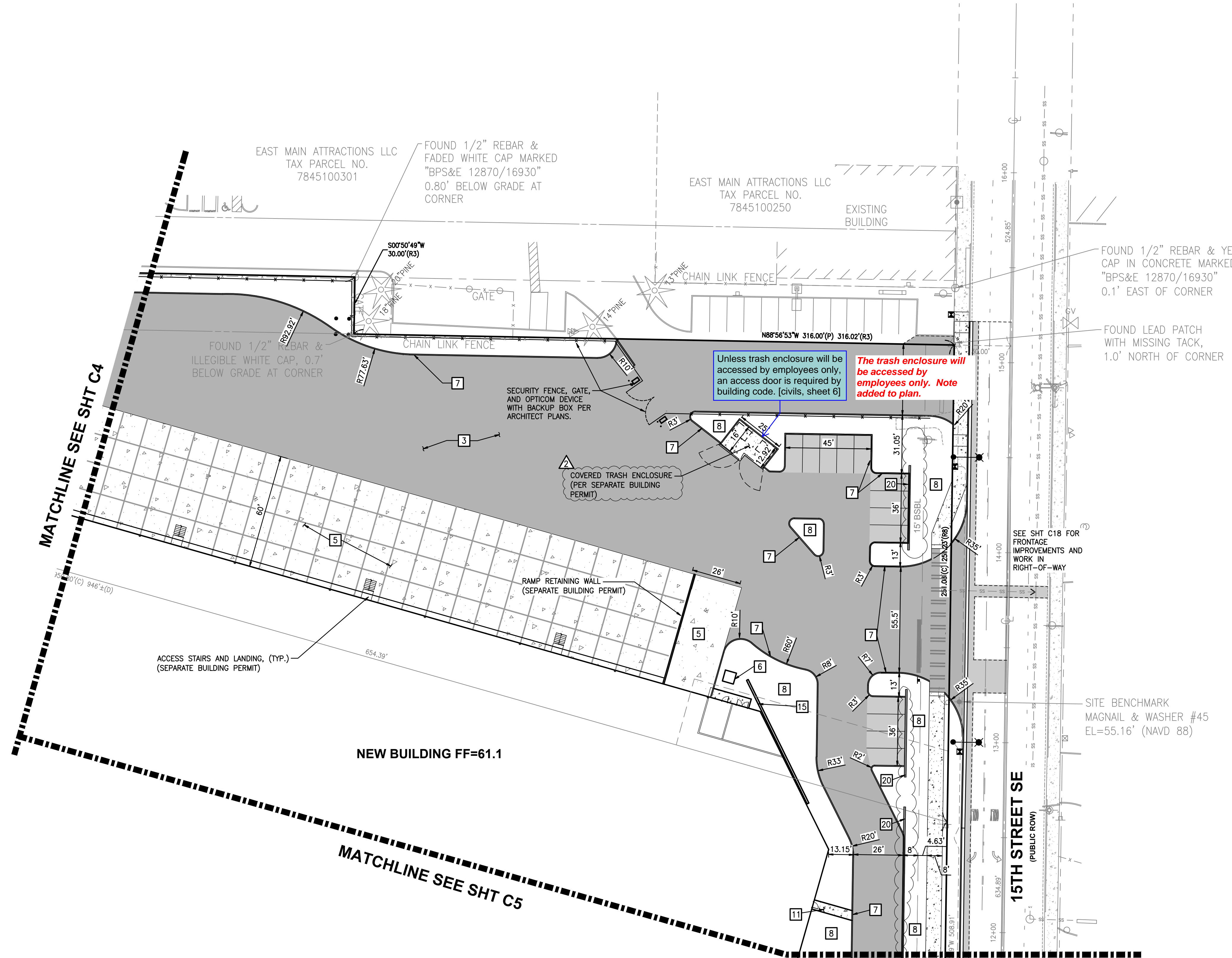
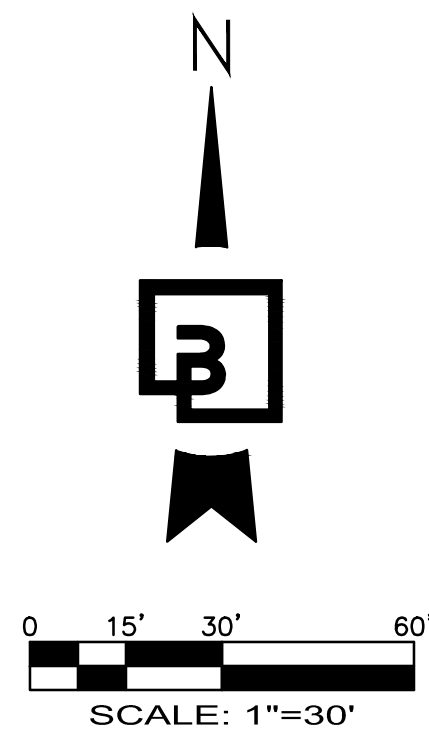
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18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.



Job Number: **22085**  
Sheet: **C5** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**SITE PLAN**



**PAVING NOTES:**

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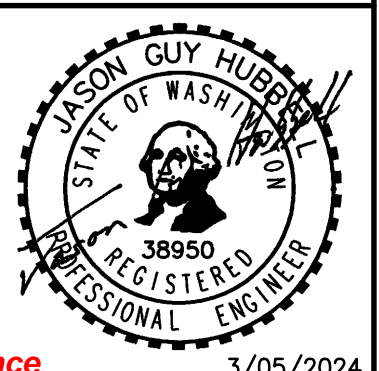
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No.	Date	By	Chk.	Appr.	Revision
1	12/06/23	JSG	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023
2	03/05/24	JSG	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024

Title: **SITE PLAN**

For: **CREFF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Designed	DL	Scale:	Horizontal	1"=30'	Vertical	N/A
Drawn	RDC					
Checked	DL					
Approved	JGH					
Date	8/23/23					

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**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

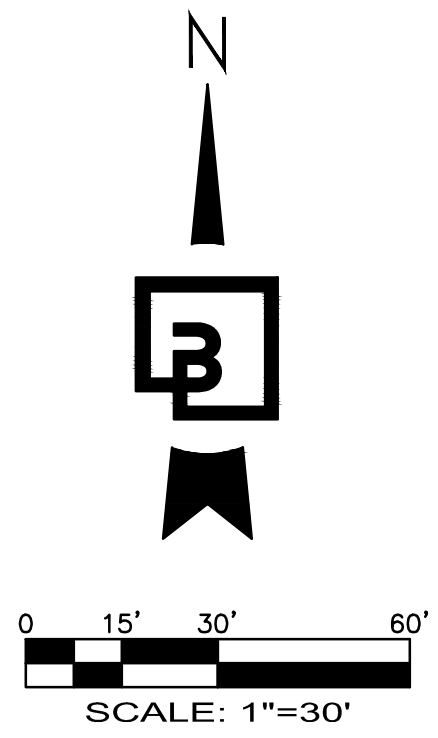
DATE: \_\_\_\_\_

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Job Number: **22085**  
Sheet: **C6** of **34**

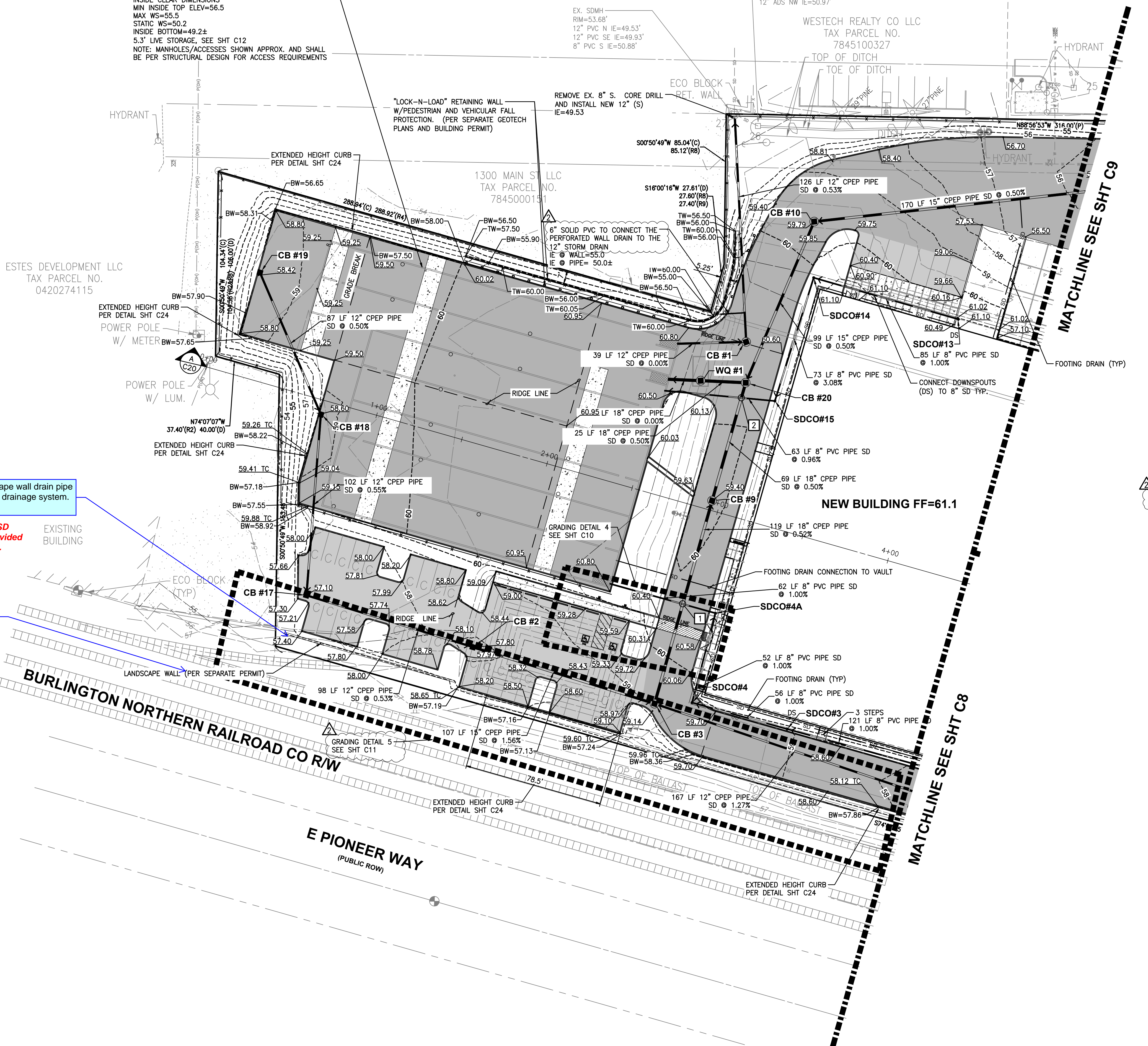
PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**GRADING AND DRAINAGE PLAN**



STORM DETENTION VAULT  
100'x168' + 40'x204' x 8' HEIGHT  
INSIDE CLEAR DIMENSIONS  
MIN INSIDE TOP ELEV=56.5  
MAX WS=55.5  
STATIC WS=50.2  
INSIDE BOTTOM=49.2±  
5.3' LIVE STORAGE. SEE SHT C12  
NOTE: MANHOLES/ACCESSES SHOWN APPROX. AND SHALL BE PER STRUCTURAL DESIGN FOR ACCESS REQUIREMENTS

EX. CB STD GRT  
RIM=52.97'  
12" ADS SE IE=51.07'  
12" ADS NW IE=50.97'

REMOVE EX. 12" (SE) AND PLUG CB.  
REPLACE LID WITH BIRD CAGE GRATE



**STORM CROSSING TABLE:**

- 1 UTILITY CROSSING  
IE 8" SD=53.54  
T/P 18" SD=53.1  
SEPARATION=0.44'
- 2 UTILITY CROSSING  
IE 8" SD=55.10  
T/P 18" SD=52.40  
SEPARATION=3.20'

Show the landscape wall drain pipe connected to the drainage system. [civils, sheet 7]

4" PVC SDR-35 SD connections provided for walls, typical.

Reference the landscape plans as well, 5/L5.10. [civils, sheet 7]

Wall reference added to plan.

**WALL NOTES:**

(WALL DESIGN PER SEPARATE PLANS AND BUILDING PERMIT).

1. WALL DESIGN NEEDS TO BE SUBMITTED TO THE OWNER AND THE ENGINEER/CITY FOR REVIEW AND APPROVAL.
2. WALL DESIGNS OVER 4- FEET HIGH REQUIRE A SEPARATE BUILDING PERMIT AND ENGINEERING DESIGN.
3. WALLS OVER 30-INCHES HIGH, WHERE TOP OF WALL IS ADJACENT TO PEDESTRIAN OR VEHICULAR PATHWAY(S), NEED TO INCLUDE PEDESTRIAN AND/OR VEHICULAR FALL PROTECTION. THE FALL PROTECTION SHALL BE DESIGNED, PERMITTED, PROVIDED BY, AND INSTALLED BY CONTRACTOR.
4. THE DIMENSIONS SHOWN ON THE PLAN ARE THE BASIS OF WALL PLACEMENT. DIMENSIONS ARE SHOWN TO THE FACE OF WALL AT THE EXPOSED GRADE. CONTRACTOR SHALL USE A CURRENT CAD FILE FROM BARGHAUSEN CONSULTING ENGINEERS, INC. TO STAKE THE FACE OF WALL LOCATION.
5. THE TYPE OF WALL CHOSEN WILL DETERMINE THE WALL WIDTH, BATTER, AND IF GEOGRID IS NECESSARY.
6. THE WALL HEIGHT SHOWN ON THE PLANS IS AN ESTIMATED MAXIMUM HEIGHT. TOP OF WALL ELEVATIONS PROVIDED ARE TO THE TOP OF EXPOSED FACE OF WALL, NOT INCLUDING ANY PEDESTRIAN OR VEHICULAR BARRIER IF NECESSARY. BOTTOM OF WALL ELEVATIONS PROVIDED ARE TO THE BOTTOM OF THE EXPOSED FACE OF WALL (AND NOT TO WALL FOOTING). THE WALL ELEVATIONS PROVIDED ON THE PLANS ARE PROVIDED AT UNIFORM LOCATIONS AND DO NOT NECESSARILY REPRESENT ALL OF THE WALL ELEVATION CHANGES. WALL PROFILES ARE REQUIRED TO BE PART OF THE DESIGN/BUILD OR STRUCTURAL DESIGN PLANS. WALL PROFILES MAY RESULT IN HIGHER OVERALL WALL HEIGHTS.
7. COORDINATION BETWEEN WALL DESIGN AND THE CONSTRUCTION DRAWINGS NEEDS TO OCCUR PRIOR TO CONSTRUCTION TO CONFIRM WALL LOCATION IN PLAN VIEW, DRAINAGE REQUIREMENTS, ETC.

Create a note 8 that wall drainage must be installed for all proposed walls. [civils, pg 7]

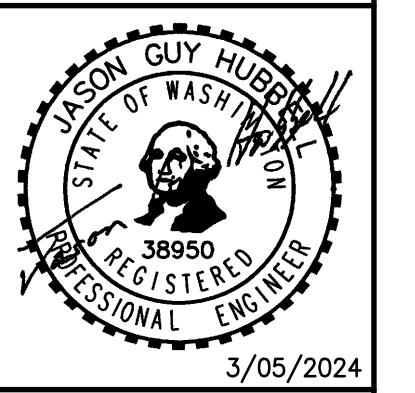
Note number 8 added for required wall drainage.

CATCH BASINS	
CB #1, TYPE 2-54" CONTROL STRUCTURE W/SOLID LOCKING LID RIM=60.66 IE=50.20 (12" W) IE=50.20 (12" N)	
CB #2, TYPE 1, W/STANDARD GRATE RIM=57.80 IE=53.48 (12" W) IE=53.48 (15" E)	
CB #3, TYPE 2-48" W/STANDARD GRATE RIM=59.21 IE=51.80 (12" E) IE=51.80 (15" W) IE=51.80 (18" N)	
CB #9, TYPE 2-48" W/STANDARD GRATE RIM=59.40 IE=51.18 (18" S) IE=51.18 (18" N)	
CB #10, TYPE 2-48" W/STANDARD GRATE RIM=59.79 IE=51.32 (15" E) IE=51.32 (15" SW)	
CB #17, TYPE 1, W/STANDARD GRATE RIM=57.10 IE=54.00 (12" N) IE=54.00 (12" E)	
CB #18, TYPE 1, W/STANDARD GRATE RIM=58.63 IE=54.56 (12" NW) IE=54.56 (12" S)	
CB #19, TYPE 1, W/STANDARD GRATE RIM=58.43 IE=55.00 (12" SE)	
CB #20, TYPE 2-48" W/SOLID LOCKING LID RIM=60.35 IE=50.83 (15" NE) IE=50.83 (18" S) IE=50.83 (18" W)	
SDCO#3, RIM=59.49 IE=54.80 (8" E) IE=54.80 (8" W)	
SDCO#4, RIM=59.56 IE=54.24 (8" E) IE=54.24 (8" N)	
SDCO#4A, RIM=60.77 IE=53.72 (8" S) IE=53.72 (8" W)	
SDCO#13, RIM=61.03 IE=58.50 (8" W)	
SDCO#14, RIM=60.39 IE=57.65 (8" E) IE=57.65 (8" S)	
SDCO#15, RIM=60.75 IE=55.40 (8" N) IE=55.40 (8" W)	
WQ #1, BPU-8161B RIM=60.39 IE=50.70 (18" E) IE=50.20 (18" W)	

Revision					
No.	Date	By	Chk.	Appr.	
2	03/05/24	DL	JSG	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
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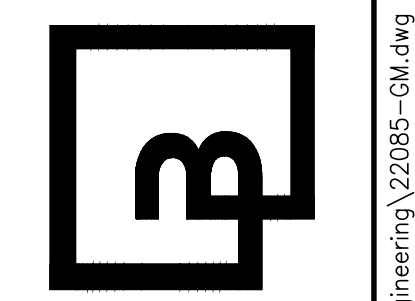
Title:  
**GRADING AND DRAINAGE PLAN**

For:  
**CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
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Designed	Drawn	Checked	Approved	Date
DL	RDC	DL	JGH	8/23/23

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Job Number: **22085**  
Sheet: **C7** of **34**

**APPROVED**

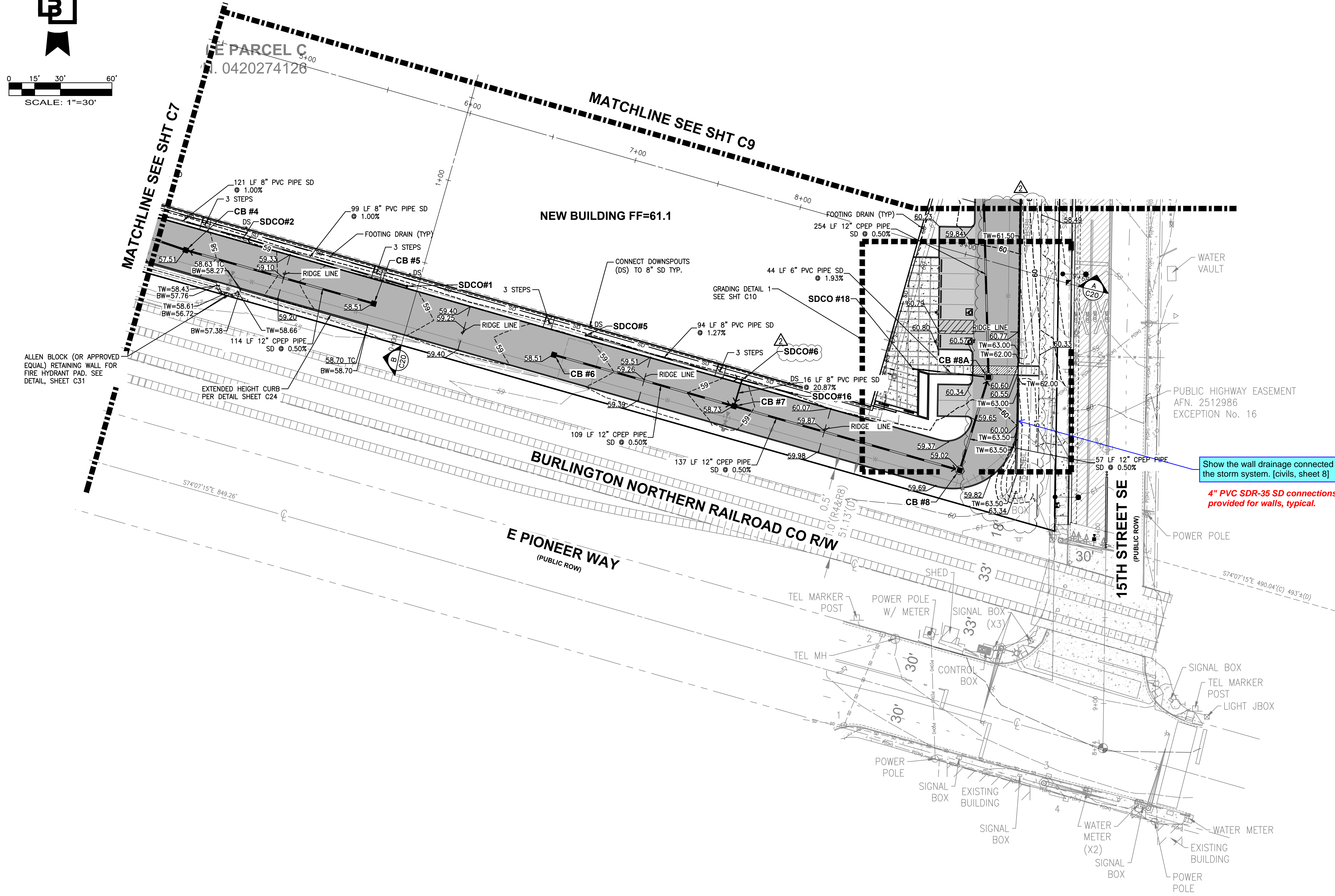
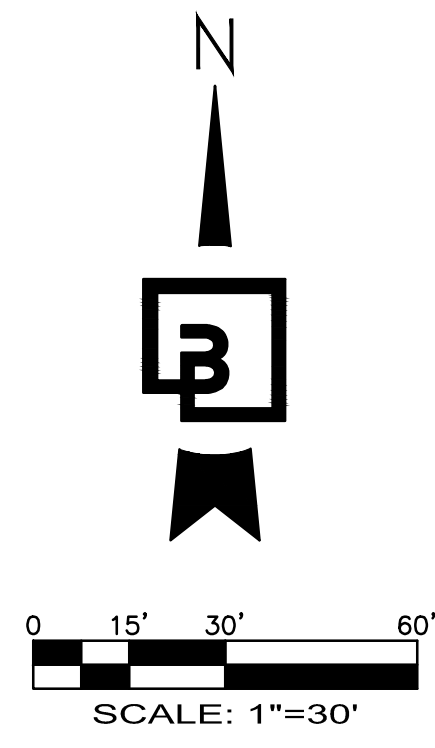
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL. DATE: \_\_\_\_\_  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

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PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**GRADING AND DRAINAGE PLAN**



Show the wall drainage connected to the storm system. [civils, sheet 8]  
**4" PVC SDR-35 SD connections provided for walls, typical.**

CATCH BASINS	
CB #4, TYPE 1, W/STANDARD GRATE RIM=57.50 IE=53.93 (12" E) IE=53.93 (12" W)	
CB #5, TYPE 1, W/STANDARD GRATE RIM=58.50 IE=54.50 (12" W)	
CB #6, TYPE 1, W/STANDARD GRATE RIM=58.50 IE=54.50 (12" E)	
CB #7, TYPE 1, W/STANDARD GRATE RIM=58.73 IE=53.95 (12" W) IE=54.28 (8" N) IE=53.95 (12" E)	
CB #8, TYPE 2-48" W/STANDARD GRATE RIM=59.00 IE=53.27 (12" W) IE=53.27 (12" N)	
CB #8A, TYPE 2-48" W/SOLID LOCKING LID RIM=60.45 IE=52.99 (12" S) IE=57.00 (6" W) IE=52.99 (12" N)	
SDCO #18, PLANTER DRAIN RIM=60.85 IE=57.85 (6" E)	
SDCO#1, RIM=59.34 IE=57.00 (8" W)	
SDCO#2, RIM=59.40 IE=56.01 (8" E) IE=56.01 (8" W)	
SDCO#5, RIM=59.69 IE=58.80 (8" E)	
SDCO#6, RIM=59.58 IE=57.60 (8" W) IE=57.60 (8" E) IE=57.60 (8" S)	
SDCO#16, RIM=60.10 IE=57.10 (8" W)	

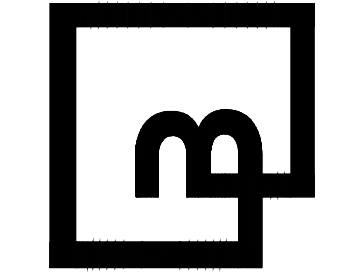
2	03/05/24	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	02/27/24	DL	JSG	BID SET
1	12/06/23	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023
No.	Date	By	Clkd.	Appr.

Title: **GRADING AND DRAINAGE PLAN**  
For: **CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Scale:	Horizontal	Vertical
	1"=30'	N/A
Designed	DL	
Drawn	RDC	
Checked	DL	
Approved	JGH	
Date	8/23/23	

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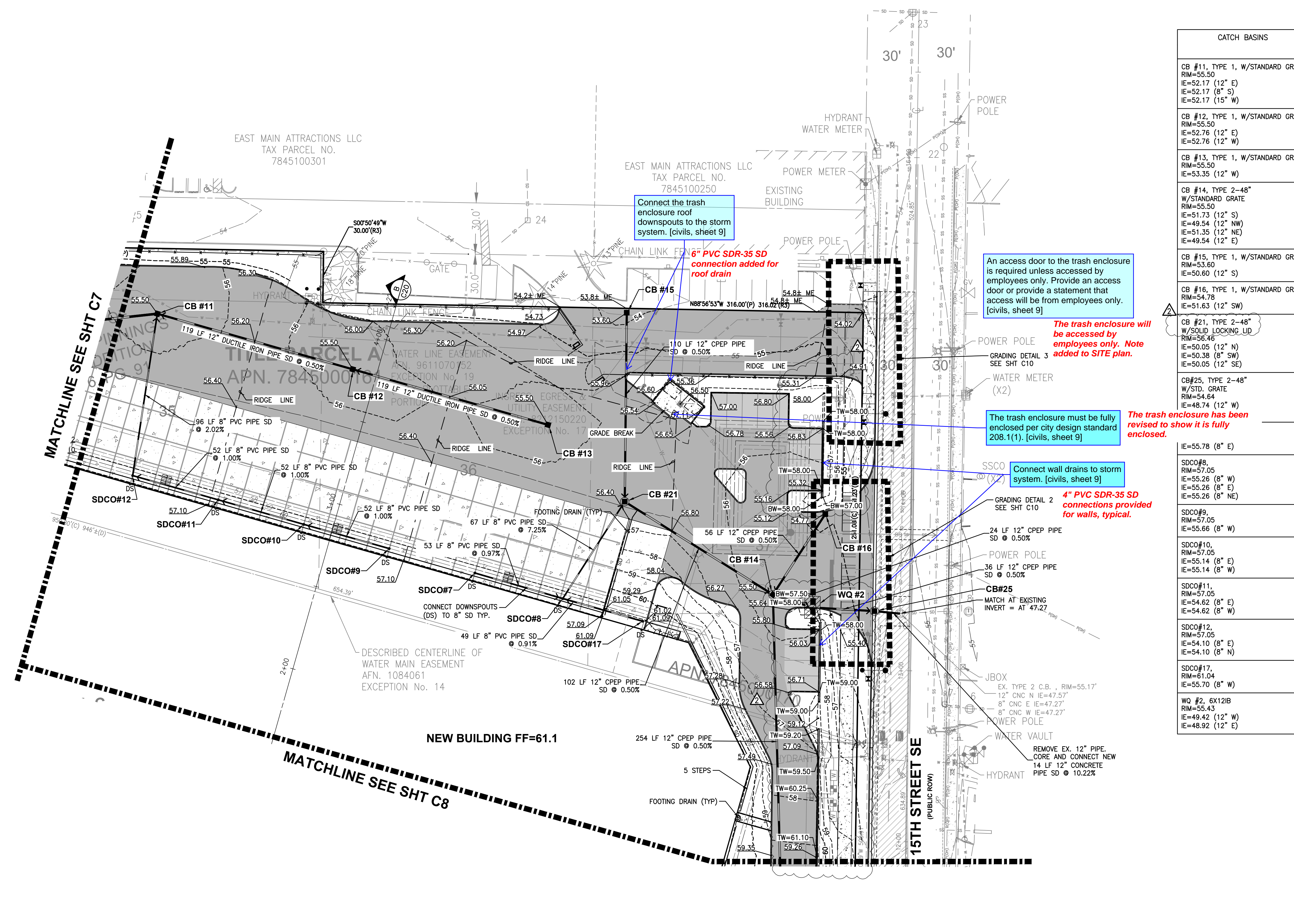
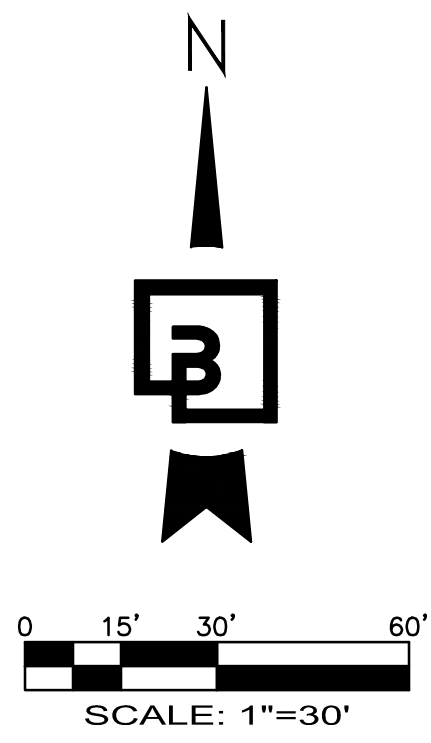
Job Number: **22085**  
Sheet: **C8** of **34**

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**GRADING AND DRAINAGE PLAN**

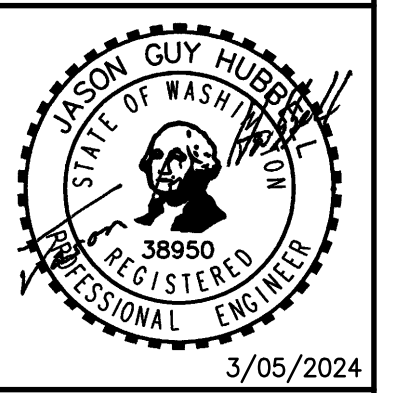


CATCH BASINS	
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CB #12, TYPE 1, W/STANDARD GRATE RIM=55.50 IE=52.76 (12" E) IE=52.76 (12" W)	
CB #13, TYPE 1, W/STANDARD GRATE RIM=55.50 IE=53.35 (12" W)	
CB #14, TYPE 2-48" W/STANDARD GRATE RIM=55.50 IE=51.73 (12" S) IE=49.54 (12" NW) IE=51.35 (12" NE) IE=49.54 (12" E)	
CB #15, TYPE 1, W/STANDARD GRATE RIM=53.60 IE=50.60 (12" S)	
CB #16, TYPE 1, W/STANDARD GRATE RIM=54.78 IE=51.63 (12" SW)	
CB #21, TYPE 2-48" W/SOLID LOCKING LID RIM=54.46 IE=50.05 (12" N) IE=50.38 (8" SW) IE=50.05 (12" SE)	
CB#25, TYPE 2-48" W/STD. GRATE (X2) RIM=54.64 IE=48.74 (12" W) IE=55.78 (8" E)	
SDCO#8, RIM=57.05 IE=55.26 (8" W) IE=55.26 (8" E) IE=55.26 (8" NE)	
SDCO#9, RIM=57.05 IE=55.66 (8" W)	
SDCO#10, RIM=57.05 IE=55.14 (8" E) IE=55.14 (8" W)	
SDCO#11, RIM=57.05 IE=54.62 (8" E) IE=54.62 (8" W)	
SDCO#12, RIM=57.05 IE=54.10 (8" E) IE=54.10 (8" N)	
SDCO#17, RIM=61.04 IE=55.70 (8" W)	
WQ #2, 6X12IB RIM=55.43 IE=49.42 (12" W) IE=48.92 (12" E)	

Revision	
No.	Date
2	03/05/24
1	02/27/24
1	12/06/23

**GRADING AND DRAINAGE PLAN**  
**FORTRESS - PUYALLUP**

**FOR:**  
CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:	
Horizontal	Vertical
1"=30'	N/A

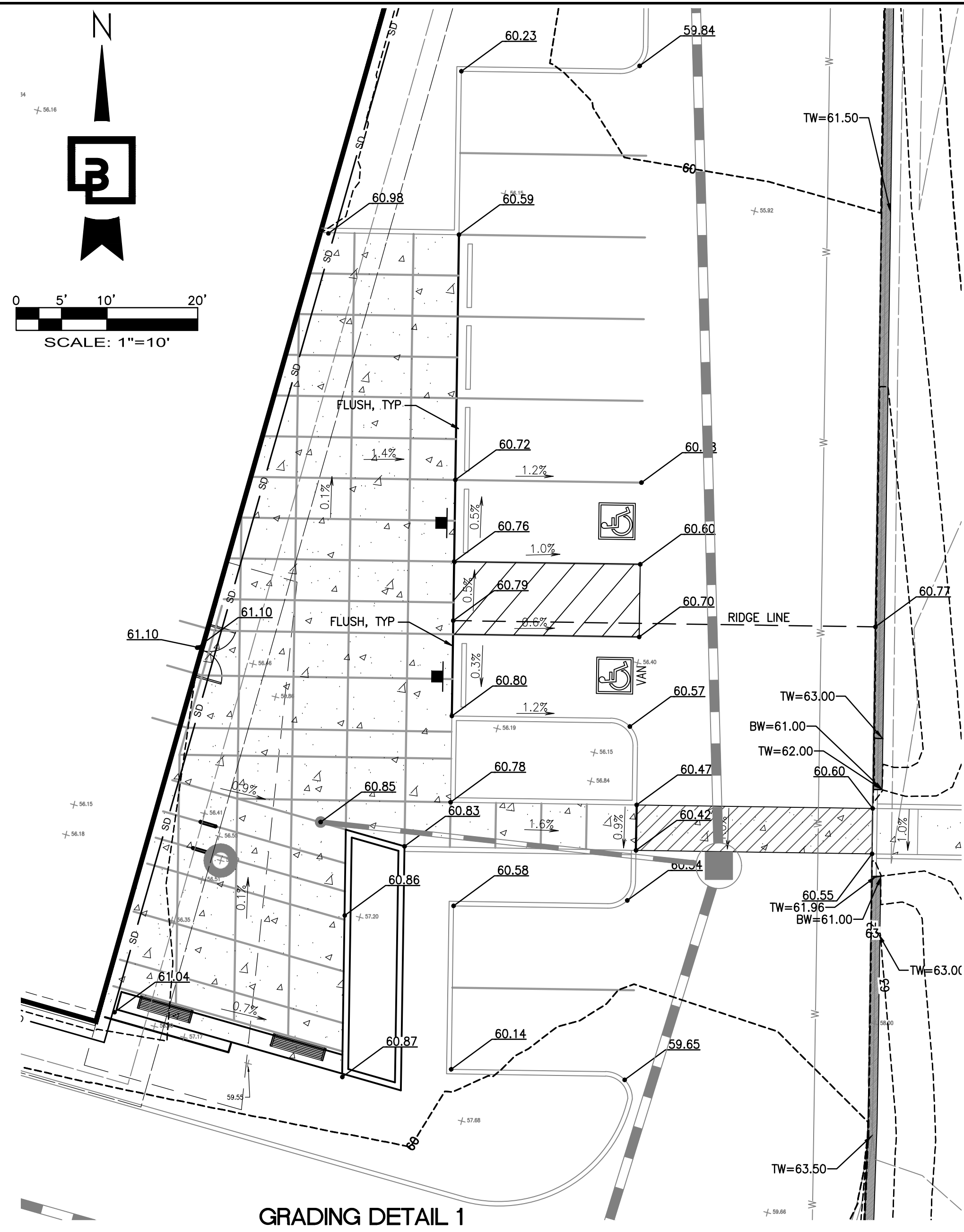
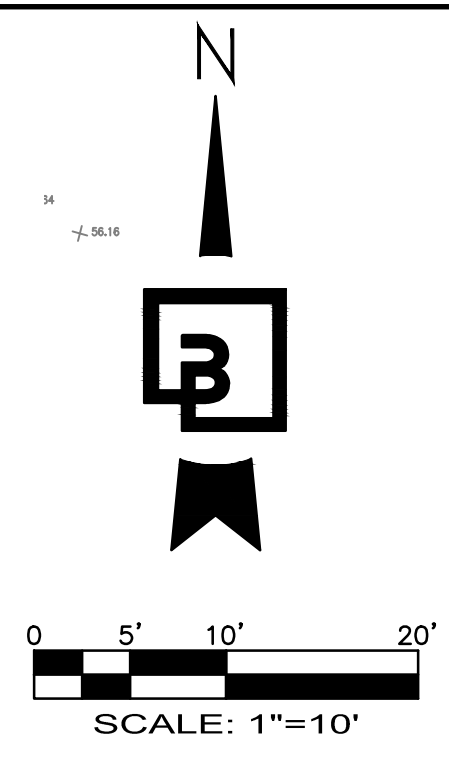
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425.251.6222  
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**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
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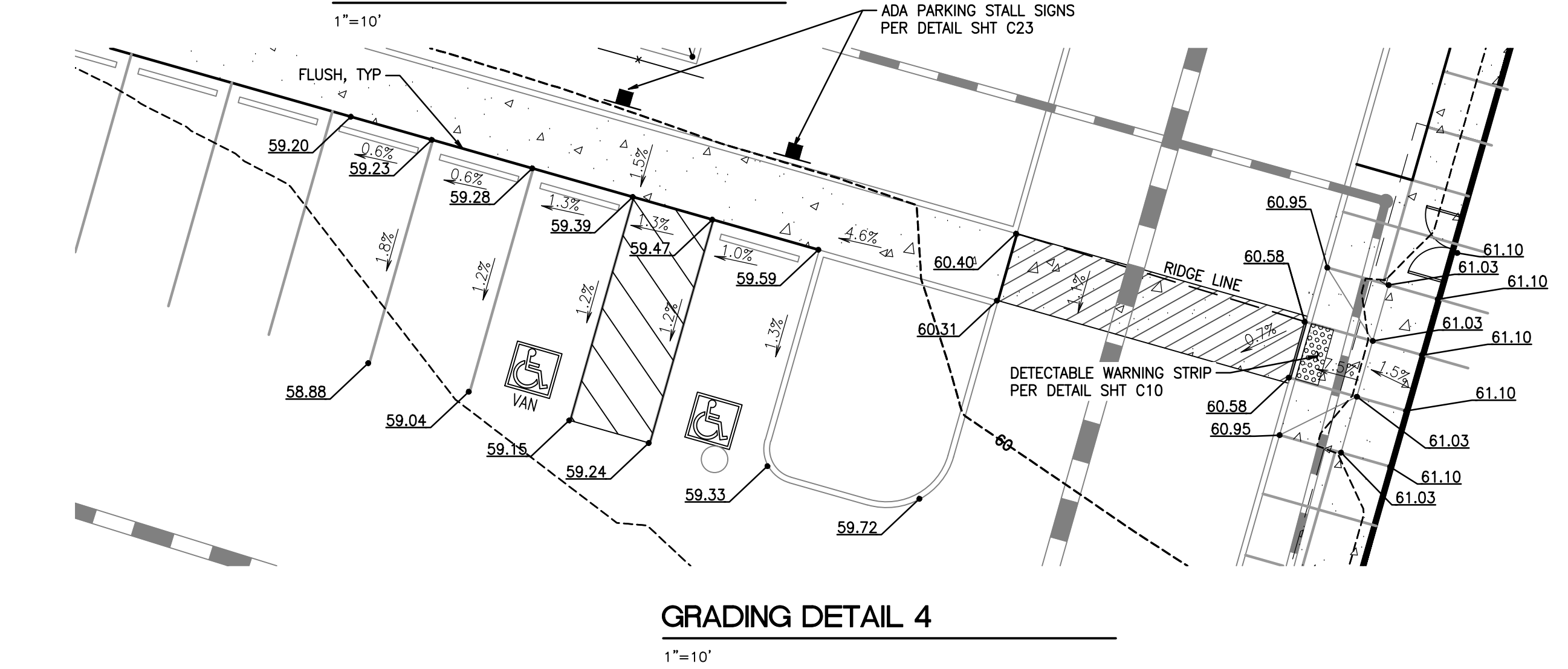


Job Number: **22085**  
Sheet: **C9** of **34**

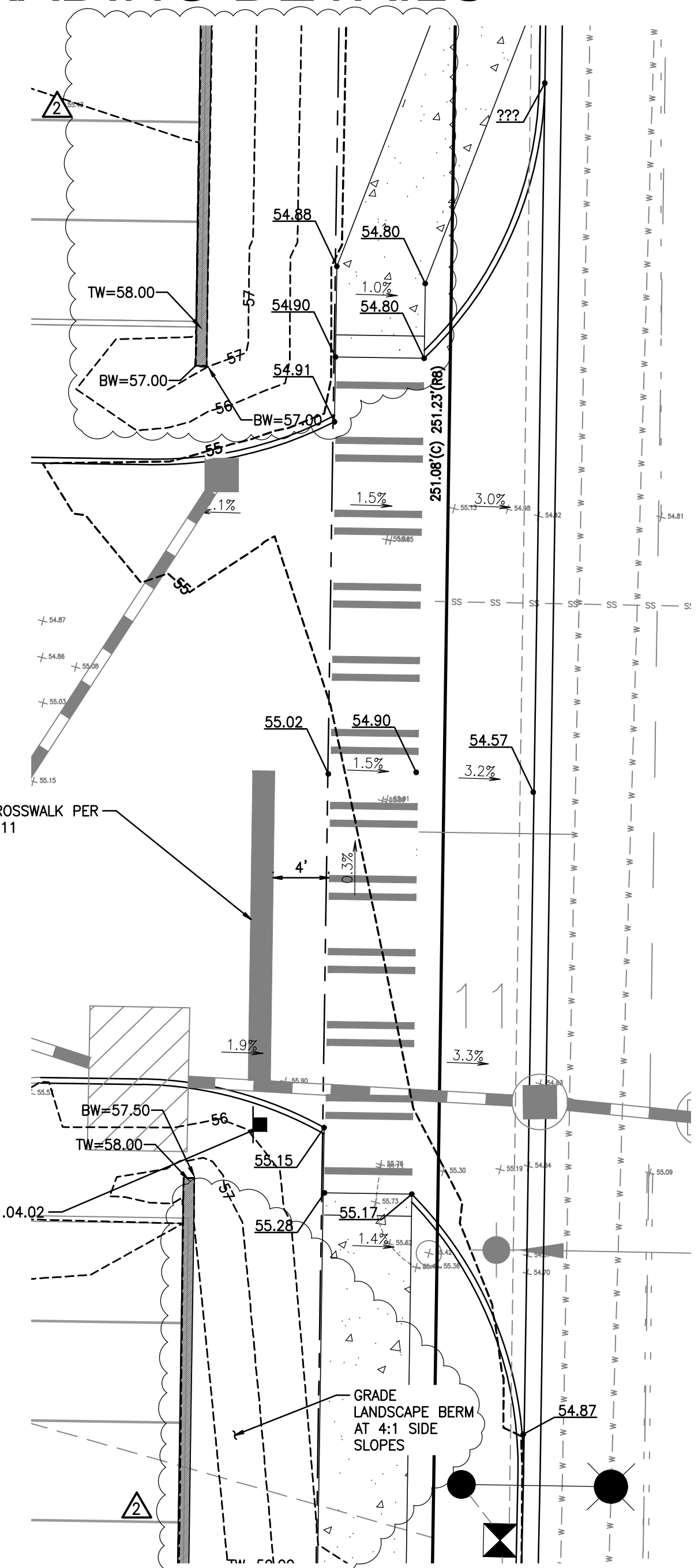
# GRADING DETAILS



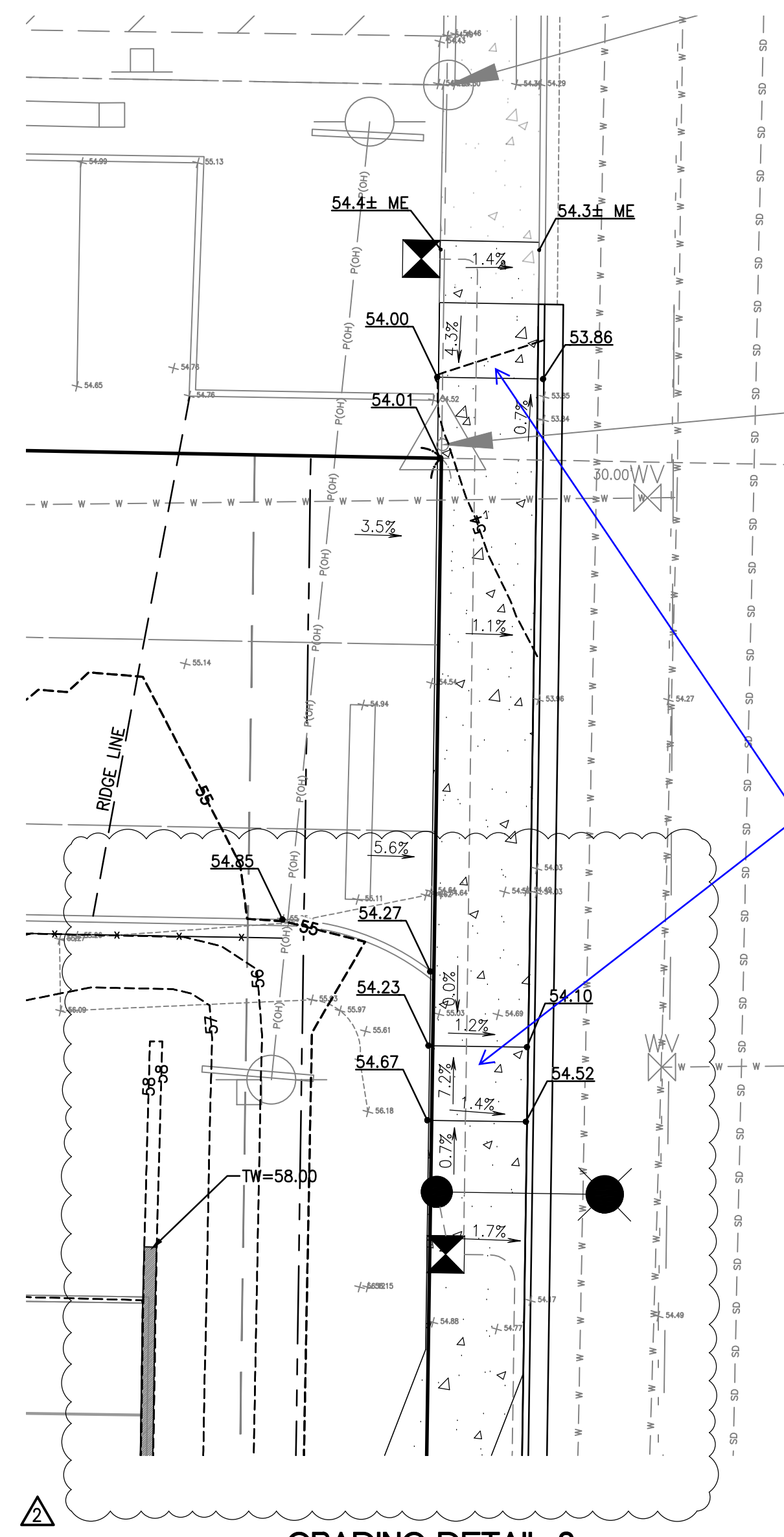
GRADING DETAIL 1  
1"=10'



GRADING DETAIL 4  
1"=10'



GRADING DETAIL 2  
1"=10'



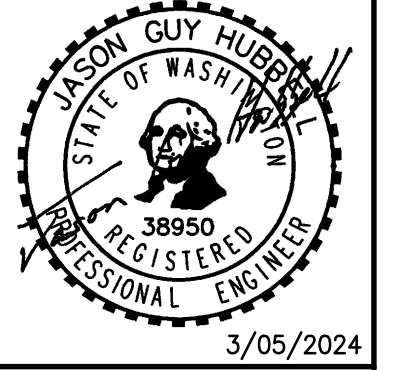
GRADING DETAIL 3  
1"=10'

Provide detectable warning surfaces if this approach will be stop controlled. [civils, pg 10]  
*Detectable warnings added at both drive approaches*

No.	Date	By	Chd.	Appr.	Revision	
2	03/05/24	DL	JSG	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
	02/27/24	DL	JSG	DL	JSG	BID SET
1	12/06/23	DL	JSG	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title: **GRADING DETAILS**  
**FORTRESS - PUYALLUP**

For: **CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Scale:	Horizontal	1"=10'	Vertical	N/A
Designed	DL		Approved	JGH
Drawn	RDC		Checked	DL
Date	8/23/23			

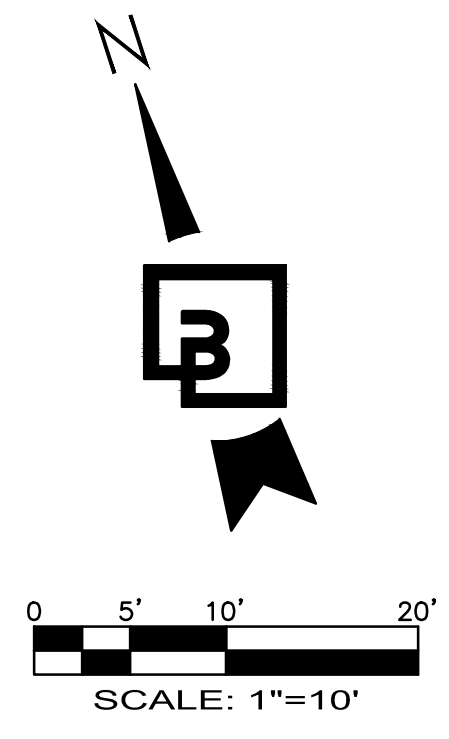
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Job Number: **22085**  
Sheet: **C10** of **34**

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CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

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PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**GRADING DETAILS**

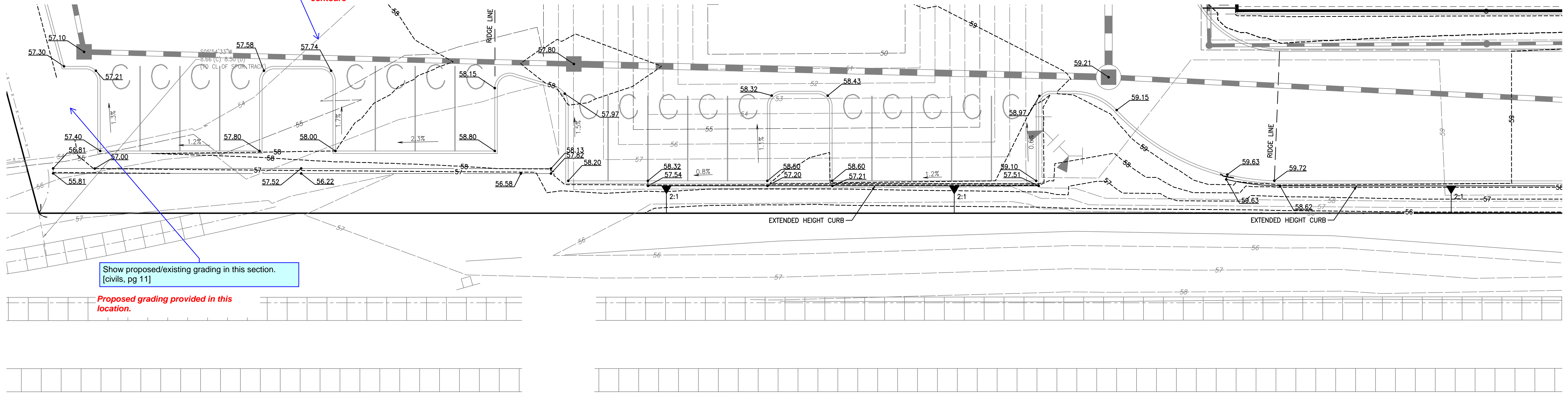


What is this contour linetype representing.  
This does not match the existing or  
proposed contour linetype within the  
legend on sheet C2. [civils, sheet C11]

legend updated to exactly  
match the existing plan  
contours

Show proposed/existing grading in this section.  
[civils, pg 11]

Proposed grading provided in this  
location.



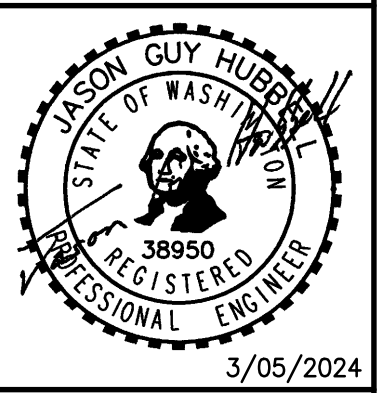
**GRADING DETAIL 5**  
1"=10'

No.	Date	By	Chd.	Appr.	Response to City Comments, Dated
2	03/05/24	DL	JSG	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
	02/27/24	DL	JSG	JSG	BID SET
1	12/06/23	DL	JSG	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title:  
**GRADING DETAILS**

**FORTRESS - PUYALLUP**

For:  
**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Designed	DL
Drawn	RDC
Checked	DL
Approved	JGH
Date	8/23/23

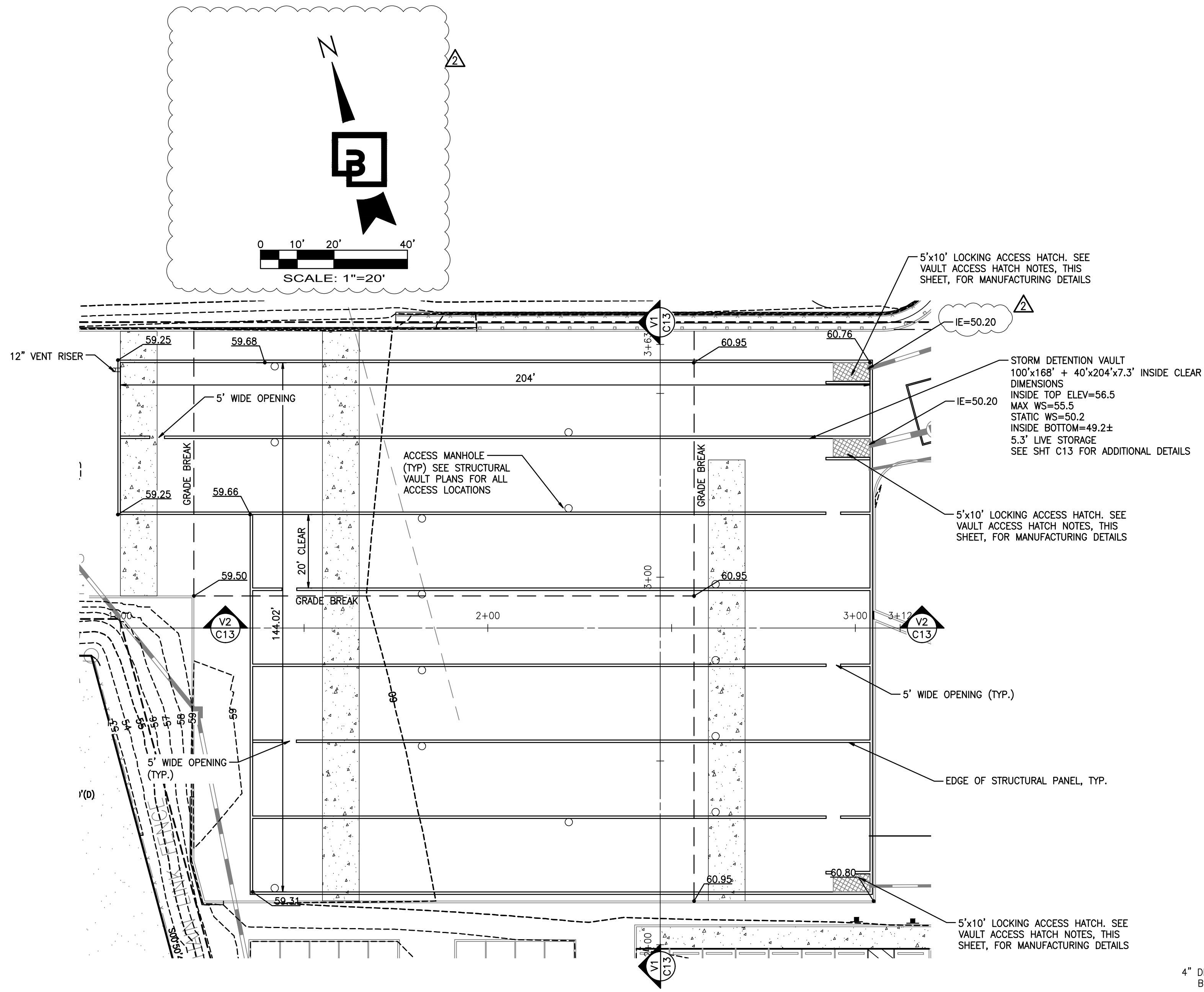
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425.251.6222  
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BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID  
AFTER 180 DAYS FROM APPROVAL.  
DATE: \_\_\_\_\_  
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DEVELOPMENT ENGINEERING  
MANAGER.

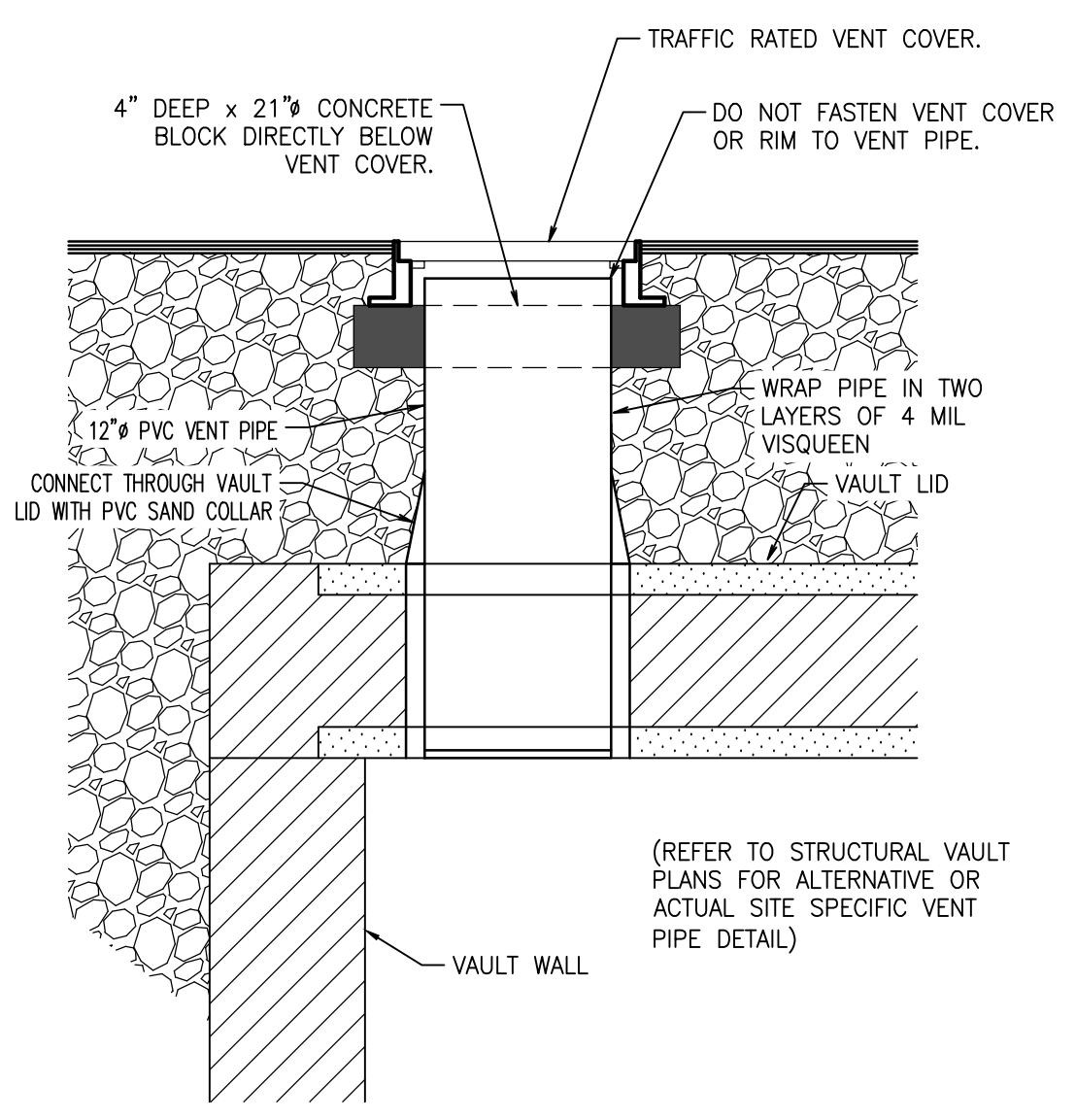


Job Number  
**22085**  
Sheet  
**C11** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**VAULT DETAILS**



**VAULT DETAIL 1**  
1"=20'



**VENTILATION PIPE DETAIL**  
NOT TO SCALE

**VAULT NOTES:**

1. VENTILATION PIPES (MIN. 12" DIAMETER OR EQUIVALENT) SHALL BE PROVIDED IN ALL CORNERS OF THE VAULT TO ALLOW FOR VENTILATION PRIOR TO ENTRY OF MAINTENANCE PERSONNEL INTO VAULT. VENTILATION PIPES ENTER THROUGH THE VAULT LID. PROVIDE LOCKING LIDS FLUSH WITH FINISH GRADE USING CLEANOUT.
2. WHERE PIPES ENTER AND LEAVE THE VAULT BELOW THE DESIGNED MAX WATER SURFACE, THEY SHALL BE SEALED USING A NON-POROUS, NON-SHRINKING GROUT.
3. ACCESS LOCATIONS, VAULT DESIGN AND WALL OPENINGS ARE PER THE STRUCTURAL DRAWING AND THE LOCATIONS ARE SHOWN FOR REFERENCE ONLY.
4. INSTALL CONFINED SPACE PLACARD AT ALL ACCESS POINTS TO THE VAULT.
5. CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

**VAULT ACCESS HATCH NOTES:**

1. PROVIDE H-20 (MIN) TRAFFIC RATED 5'x10' LOCKING, PERSONAL 2-DOOR SOLID ACCESS HATCH.
2. FRAME AND HATCH COVER SHALL BE DESIGNED FOR 150 PSF LIVE LOAD.
3. A SPRING-ASSISTED LIFT WITH HOLD-OPEN FEATURE TORSION BARS SHALL BE INSTALLED. AUTOMATIC HOLD-OPEN ARM WITH GRIP HANDLE RELEASE SHALL BE ADDED.
4. POLYPROPYLENE RUNGS OR LADDER SHALL BE INSTALLED EXTENDING FROM THE HATCH TO THE BOTTOM OF THE VAULT.
5. A LADDER-UP MECHANISM SHALL BE INSTALLED CENTERED OVER THE RUNGS OR LADDER BELOW THE HATCH.
6. ALL HARDWARE SHALL BE ZINC-COATED.

**VAULT ACCESS OPENINGS NOTES:**

1. IN ADDITION TO THE HATCHES SHOWN, VAULT ACCESS OPENINGS MUST BE PROVIDED SUCH THAT NO LOCATION WITHIN THE VAULT IS MORE THAN 50 FEET FROM AN ACCESS OPENING. ACCESS TO EACH "V" ON THE VAULT FLOOR MUST BE PROVIDED.
2. ACCESS OPENINGS MUST HAVE ROUND, SOLID LOCKING LIDS, OR 3 FOOT SQUARE, LOCKING DIAMOND PLATE COVERS.

**DETENTION VAULT DATA:**

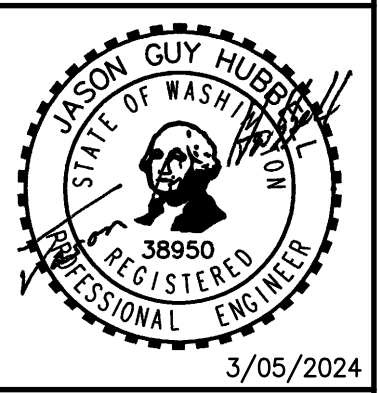
MIN INSIDE TOP OF VAULT ELEV=	56.7
MAX W.S. ELEV=	55.5
STATIC W.S. ELEV=	50.2
SEE THIS SHEET AND C13 FOR DETAILS.	
DETENTION VAULT:	
LIVE STORAGE VOLUME REQUIRED=	143,488 C.F.
LIVE STORAGE VOLUME PROVIDED=	143,488 C.F.
AS-BUILT DETENTION VOLUME CONSTRUCTED=	_____ C.F.

DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
DL	JSG	BID SET
DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023
DL	JSG	Appr.
DL	JSG	By
DL	JSG	Date
DL	JSG	No.
DL	JSG	Revision

**VAULT DETAILS**

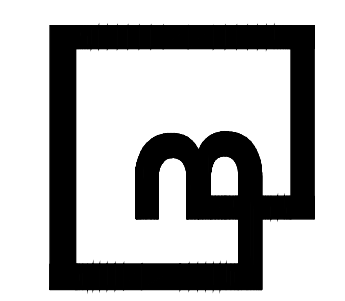
**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:	Horizontal	1"=10'	Vertical	N/A					
Designed	DL	Drawn	RDC	Checked	DL	Approved	JGH	Date	8/23/23

**Barghausen Consulting Engineers, Inc.**  
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Kent, WA 98032  
425.251.6222  
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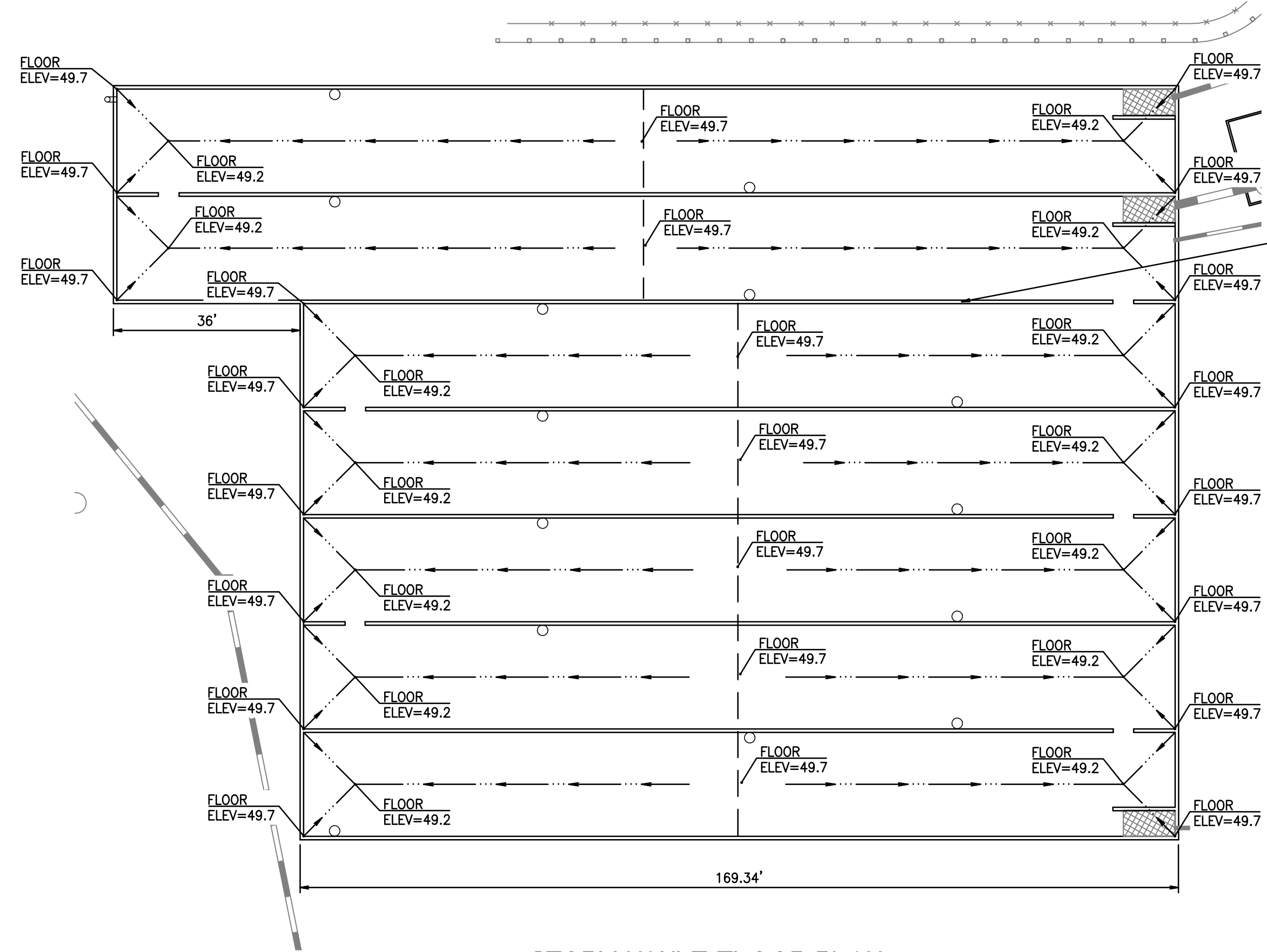
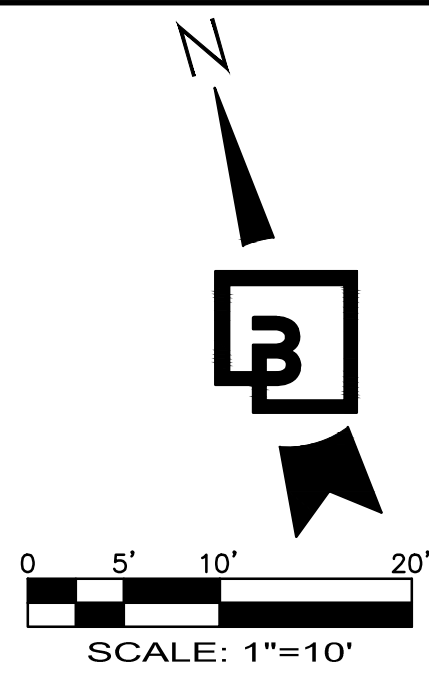


**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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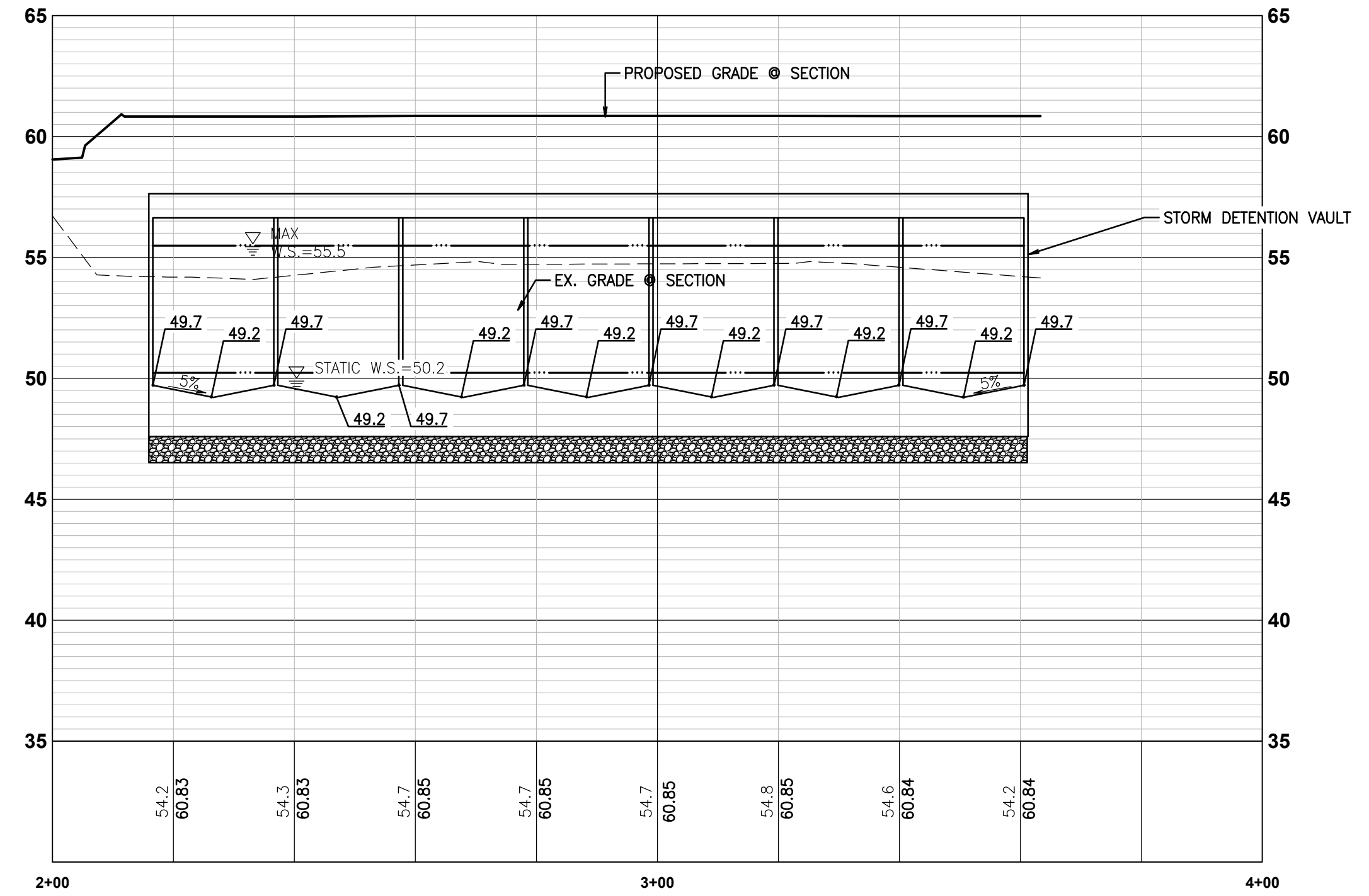
Job Number  
**22085**  
Sheet  
**C12** of **34**

# Vault Details



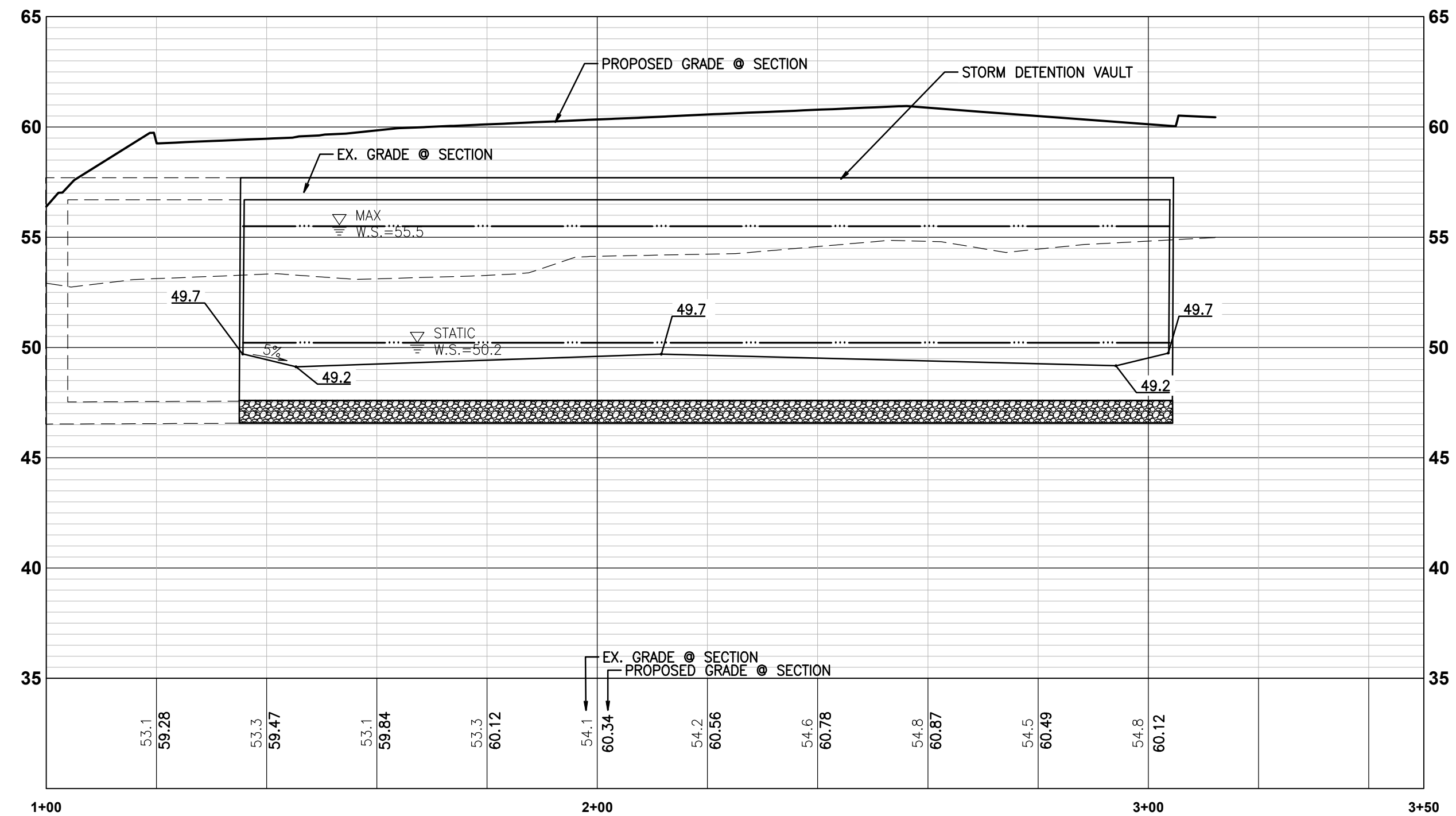
**STORM VAULT FLOOR PLAN**

1"=20'



**VAULT SECTION VI-VI**

1"=20' HORIZ, 1"=5' VERT



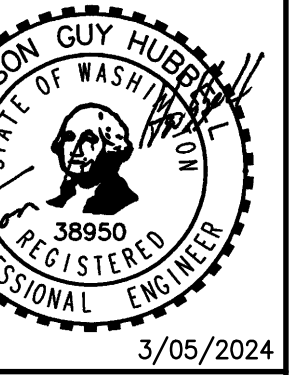
**VAULT SECTION V2-V2**

1"=20' HORIZ, 1"=5' VERT

No.	Date	By	Chk.	Appr.	Revision
2	03/05/24	DL	JSG	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	02/27/24	DL	JSG	JSG	BID SET
1	12/06/23	DL	JSG	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

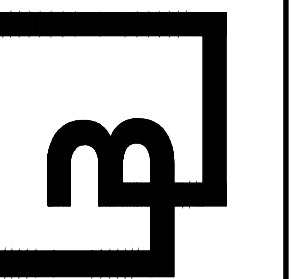
Title: **VAULT DETAILS**

For: **CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049**



Scale:	Horizontal	1"=10'	Vertical	N/A					
Designed	DL	Drawn	RDC	Checked	DL	Approved	JGH	Date	8/23/23

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Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)



**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

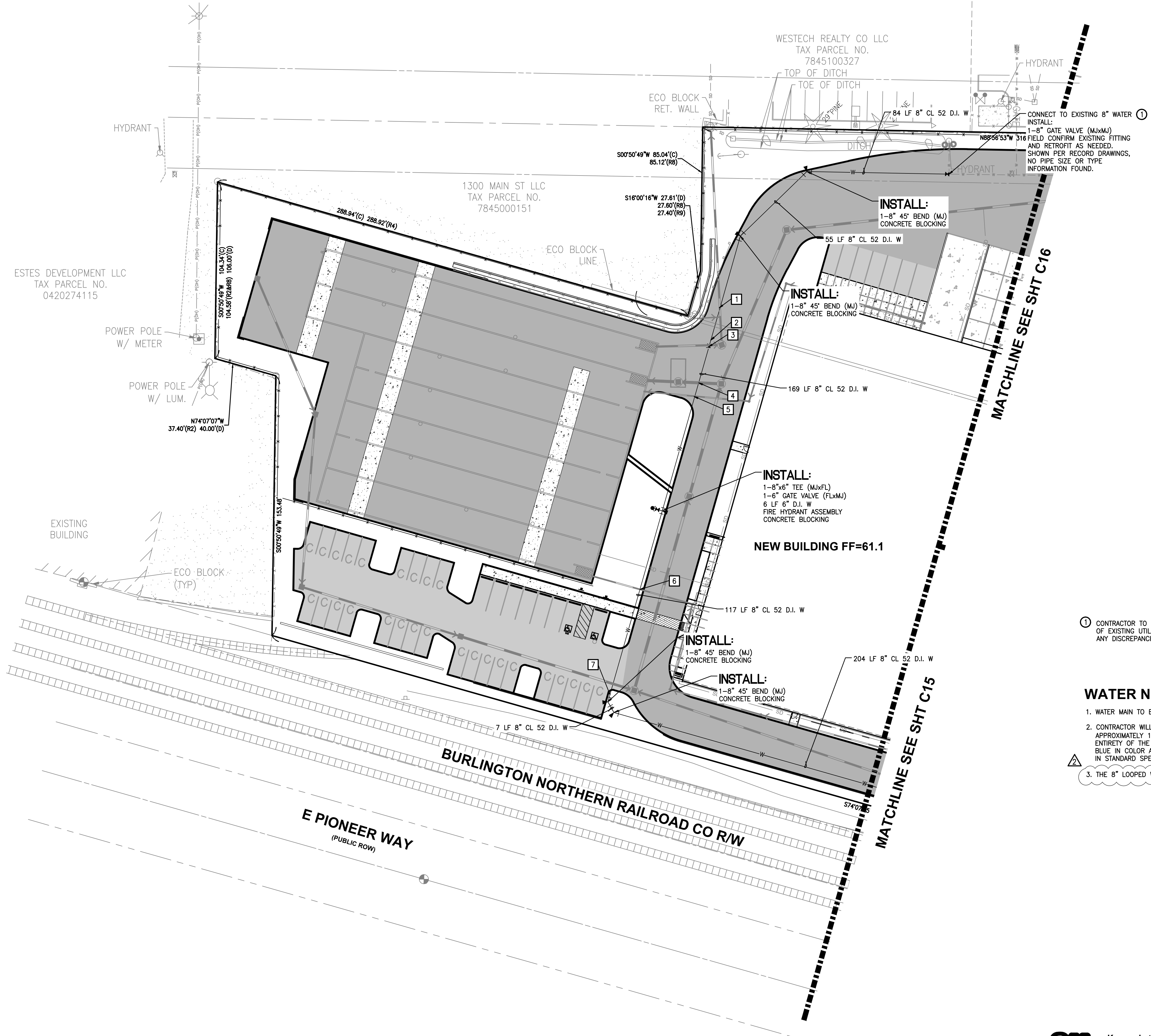
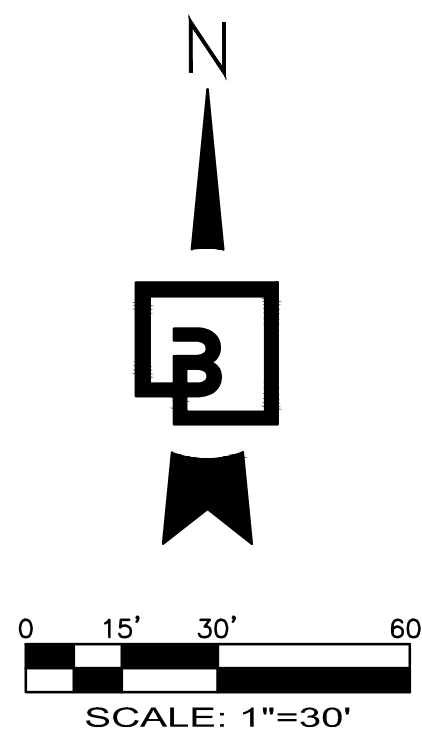
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.



Know what's below.  
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Job Number: **22085**  
Sheet: **C13** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**WATER AND SANITARY SEWER PLAN**



**UTILITY CROSSING TABLE:**

- 1 UTILITY CROSSING  
IE 8" W=55.9  
T/P 12" SD=51.00  
SEPARATION=5.5'
- 2 UTILITY CROSSING  
IE 8" W=55.9  
T/P 8" SD=51.20  
SEPARATION=5.7'
- 3 UTILITY CROSSING  
IE 8" W=56.2  
T/P 12" SD=51.20  
SEPARATION=5.0'
- 4 UTILITY CROSSING  
IE 8" W=56.2  
T/P 18" SD=51.8  
SEPARATION=4.4'
- 5 UTILITY CROSSING  
IE 8" W=56.2  
T/P 8" SD=55.6  
SEPARATION=0.6'
- 6 UTILITY CROSSING  
IE 8" W=55.3  
T/P 8" SD=53.7  
SEPARATION=1.6'
- 7 UTILITY CROSSING  
IE 8" W=54.2  
T/P 15" SD=51.9  
SEPARATION=2.3'

① CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITY, POT HOLE AS NECESSARY. NOTIFY ENGINEER OF ANY DISCREPANCIES.

**WATER NOTES:**

- 1. WATER MAIN TO BE INSTALLED WITH A MINIMUM COVER OF 36" .
- 2. CONTRACTOR WILL INSTALL DETECTABLE MARKING TAPE APPROXIMATELY 1.5' ABOVE THE TOP OF THE PIPE ALONG THE ENTIRETY OF THE MAIN AND SERVICES; DETECTABLE TAPE SHALL BE BLUE IN COLOR AND MEET THE MATERIAL REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION 9-15.18 PER SHT C14
- 3. THE 8" LOOPED WATER LINE IS "PRIVATE".

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.  
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.



No.	Date	By	Chk.	Appr.	Revision
2	03/05/24	DL	JSG	DL	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
	02/27/24	DL	JSG	DL	BID SET
1	12/06/23	DL	JSG	DL	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

**Title:** WATER AND SANITARY SEWER PLAN

**For:** CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

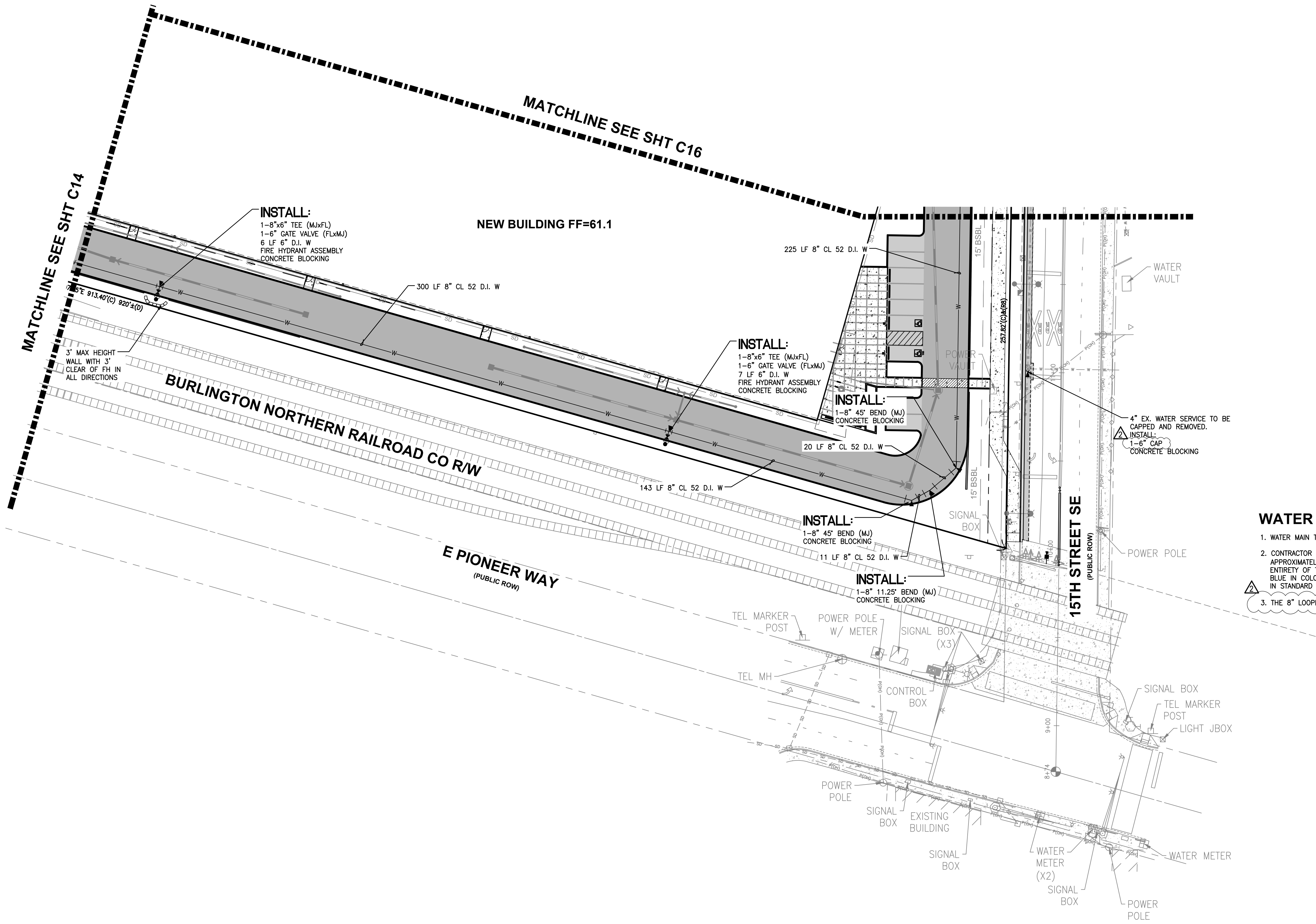
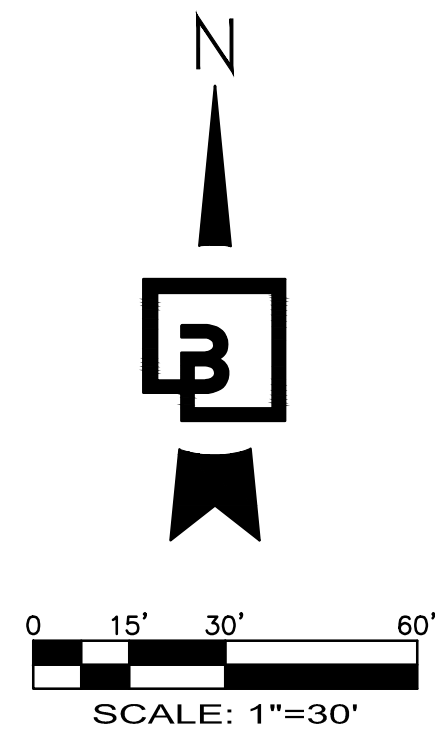
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Designed	DL
Drawn	RDC
Checked	DL
Approved	JGH
Date	6/23/23

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Job Number: **22085**  
Sheet: **C14** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**WATER AND SANITARY SEWER PLAN**



- WATER NOTES:**
1. WATER MAIN TO BE INSTALLED WITH A MINIMUM COVER OF 36".
  2. CONTRACTOR WILL INSTALL DETECTABLE MARKING TAPE APPROXIMATELY 1.5' ABOVE THE TOP OF THE PIPE ALONG THE ENTIRETY OF THE MAIN AND SERVICES. DETECTABLE TAPE SHALL BE BLUE IN COLOR AND MEET THE MATERIAL REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION 9-15.18 PER SHT C14
  3. THE 8" LOOPED WATER LINE IS "PRIVATE".

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	JSG	DL
		DL	JSG	DL
		DL	JSG	DL
1	12/06/23	DL	JSG	DL
		DL	JSG	DL

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

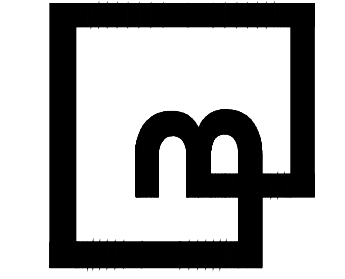
Title: **WATER AND SANITARY SEWER PLAN**  
**FORTRESS - PUYALLUP**

FOR: **CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Designed	DL	RDC	DL	JGH	Date	8/23/23
Drawn						
Checked						
Approved						

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**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

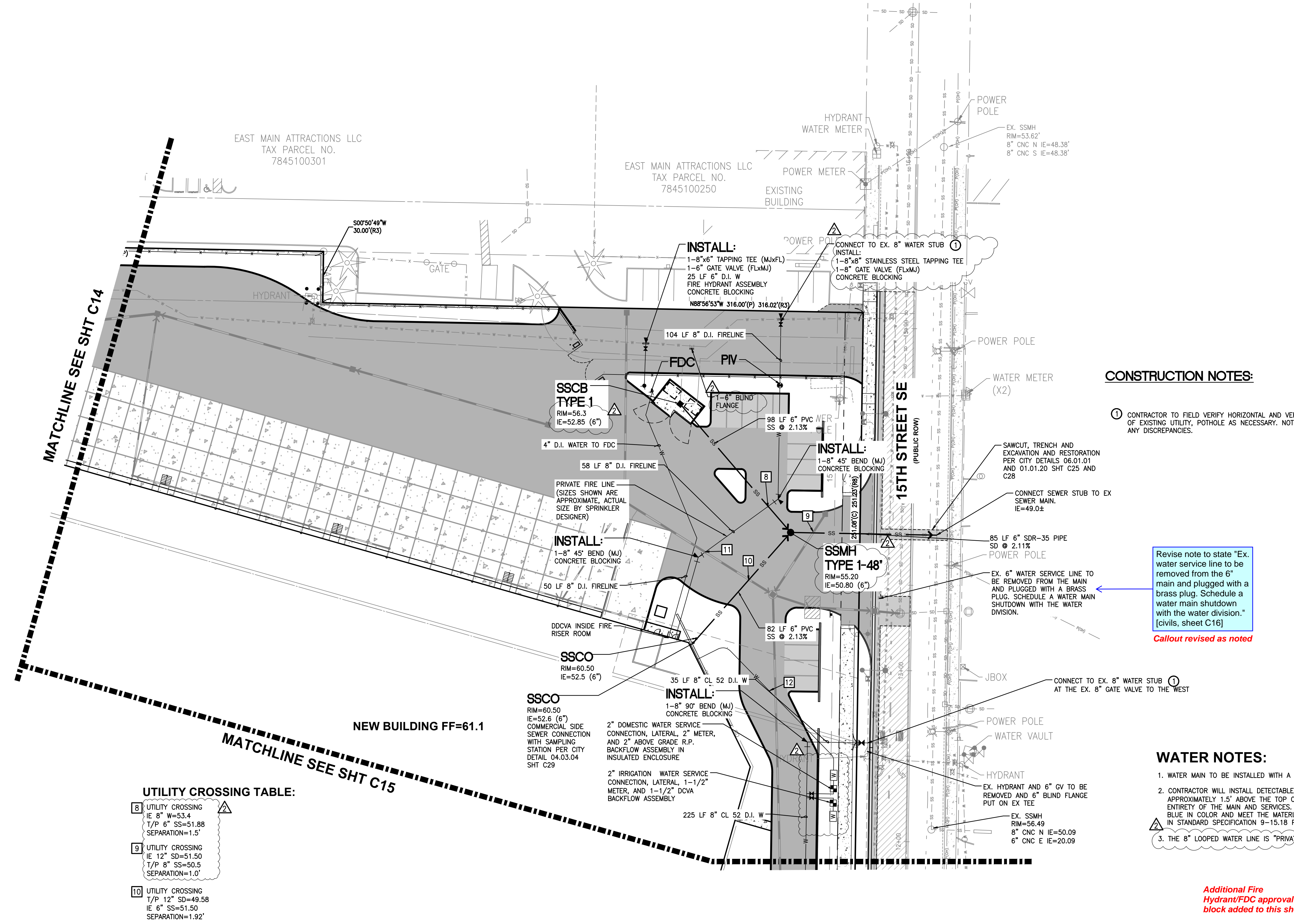
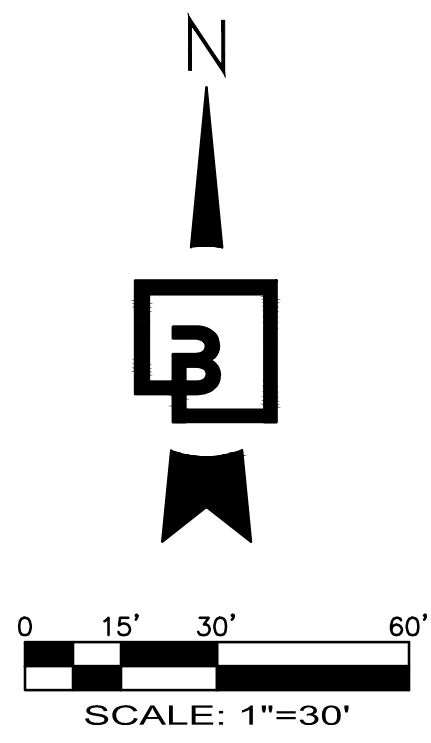
DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

Know what's below.  
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Job Number: **22085**  
Sheet: **C15** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**WATER AND SANITARY SEWER PLAN**



**CONSTRUCTION NOTES:**

1 CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITY, POTHOLE AS NECESSARY. NOTIFY ENGINEER OF ANY DISCREPANCIES.

Revise note to state "Ex. water service line to be removed from the 6" main and plugged with a brass plug. Schedule a water main shutdown with the water division." [civils, sheet C16]  
**Callout revised as noted**

**WATER NOTES:**

1. WATER MAIN TO BE INSTALLED WITH A MINIMUM COVER OF 36"
2. CONTRACTOR WILL INSTALL DETECTABLE MARKING TAPE APPROXIMATELY 1.5' ABOVE THE TOP OF THE PIPE ALONG THE ENTIRETY OF THE MAIN AND SERVICES. DETECTABLE TAPE SHALL BE BLUE IN COLOR AND MEET THE MATERIAL REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION 9-15.18 PER SHT C14
3. THE 8" LOOPED WATER LINE IS "PRIVATE".

Include additional City Fire Hydrant/FDC approval block. [civils, sheet C16]

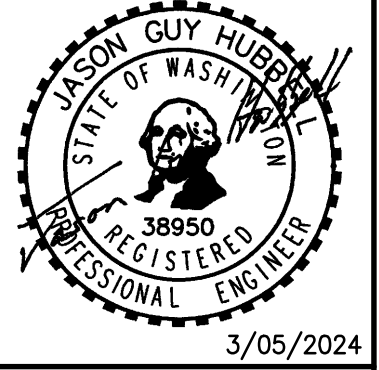
**UTILITY CROSSING TABLE:**

8	UTILITY CROSSING IE 8" W=53.4 T/P 6" SS=51.88 SEPARATION=1.5'
9	UTILITY CROSSING IE 12" SD=51.50 T/P 8" SS=50.5 SEPARATION=1.0'
10	UTILITY CROSSING T/P 12" SD=49.58 IE 6" SS=51.50 SEPARATION=1.92'
11	UTILITY CROSSING IE 8" W=53.4 T/P 12" SD=50.75 SEPARATION=2.6'

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	JSG	DL
		DL	JSG	DL
1	12/06/23	DL	JSG	DL

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
BID SET  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023  
Revision

**Title:**  
WATER AND SANITARY SEWER PLAN  
**FOR:**  
CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:	Horizontal	1"=30'	Vertical	N/A
Designed	DL		Approved	JGH
Drawn	RDC		Checked	JGH
Date		8/23/23		

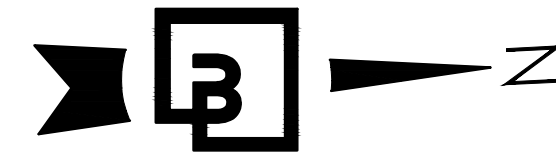
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Kent, WA 98032  
425.251.6222  
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**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
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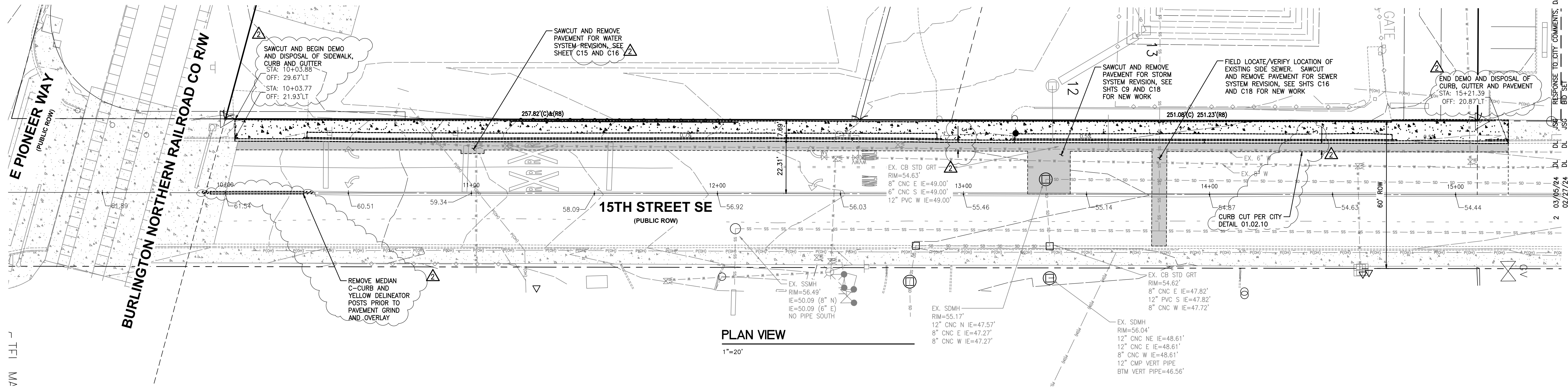
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Sheet: **C16** of **34**



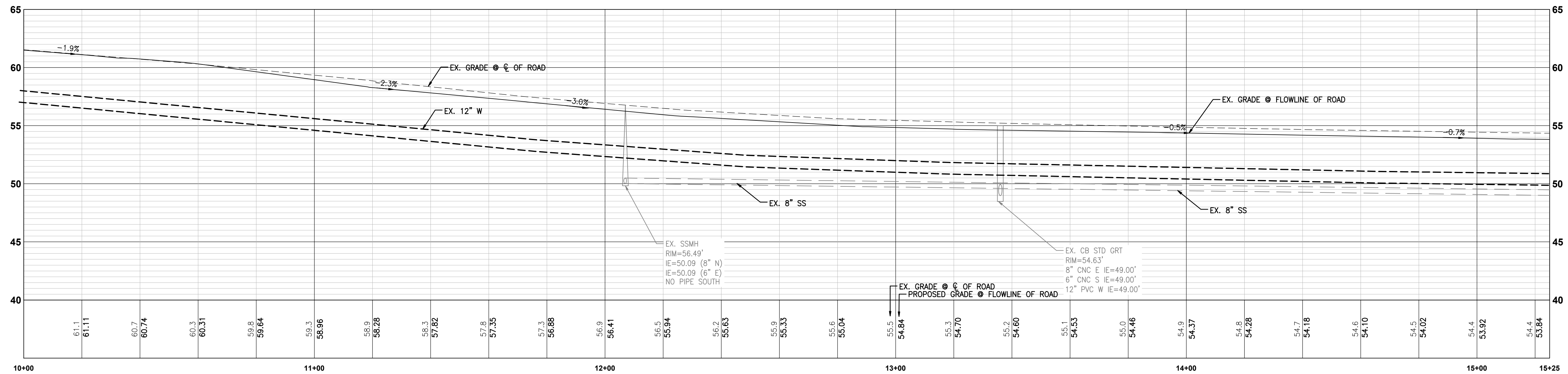


0 10' 20' 40'  
SCALE: 1"=20'

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**RIGHT-OF-WAY DEMOLITION PLAN**



**PLAN VIEW**  
1"=20'

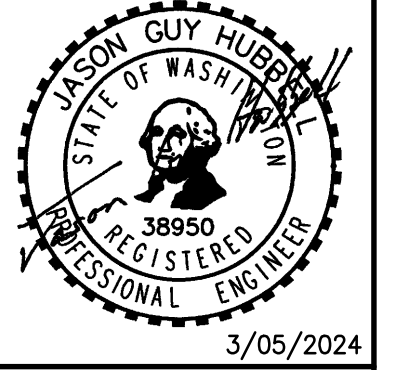


**PROFILE VIEW**  
1"=20' HORIZ, 1"=5' VERT

No.	Date	By	Chk.	Appr.
1	12/06/23	JSG	DL	DL
2	03/05/24	JSG	DL	DL
	02/27/24	JSG	DL	DL

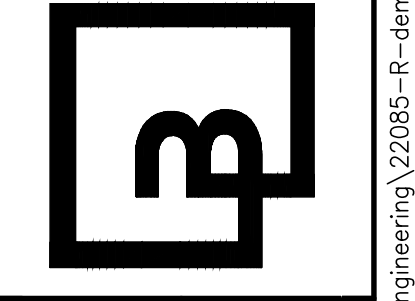
RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
 BID SET  
 RESPONSE TO CITY COMMENTS, DATED 10-06-2023

**FOR:**  
**CREF3 PUYALLUP OWNER LLC**  
 11611 SAN VICENTE BLVD  
 10TH FLOOR  
 LOS ANGELES, CA 90049



Designed	DL
Drawn	RDC
Checked	DL
Approved	JGH
Date	8/23/23

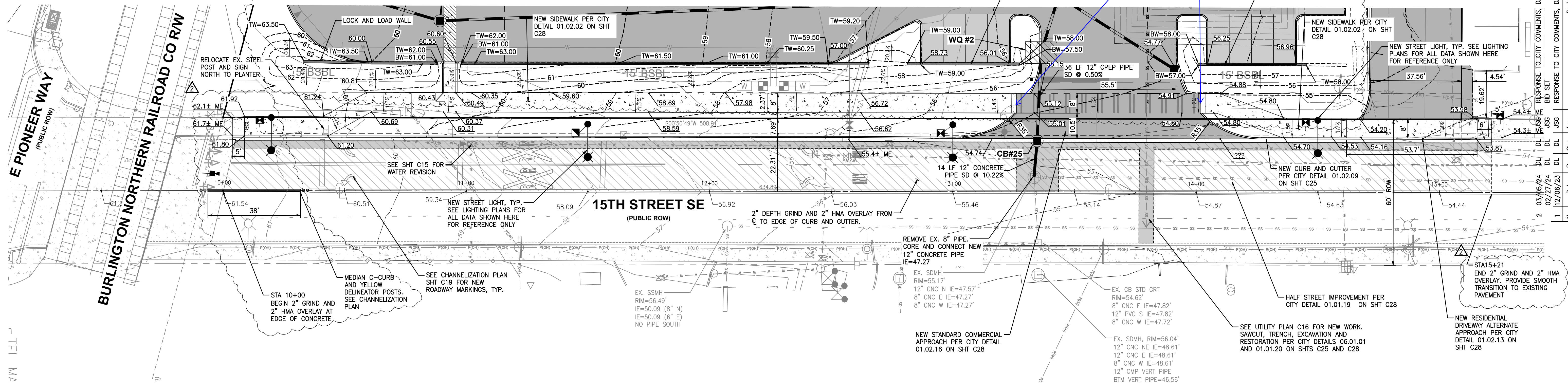
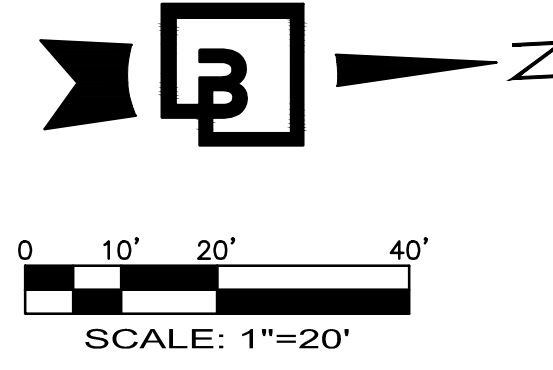
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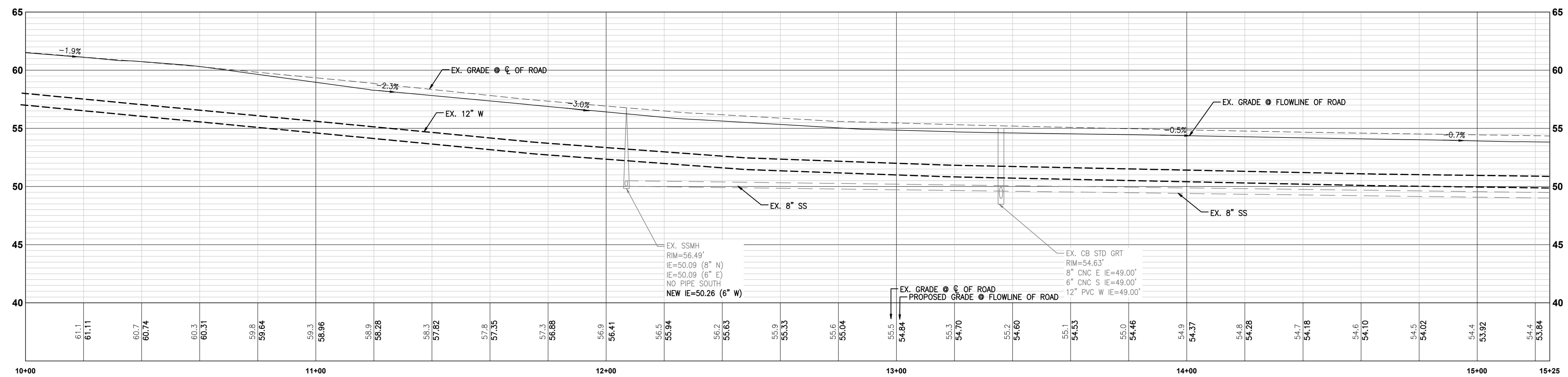
**APPROVED**  
 BY: \_\_\_\_\_  
 CITY OF PUYALLUP  
 DEVELOPMENT ENGINEERING  
 DATE: \_\_\_\_\_

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PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**FRONTAGE IMPROVEMENT PLAN**



**PLAN VIEW**  
1"=20'

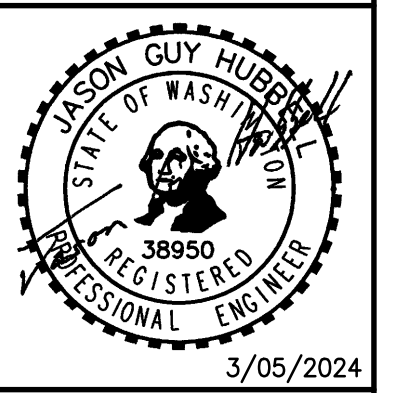


**PROFILE VIEW**  
1"=20' HORIZ, 1"=5' VERT

Detectable warnings added at both drive approaches  
Provide detectable warning surfaces if this approach will be stop controlled leaving the site. [civils, sheet C18]

**FRONTAGE IMPROVEMENT PLAN**  
**FORTRESS - PUYALLUP**

**FOR:**  
CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:	Horizontal	Vertical
	1"=20'	N/A
Designed	DL	
Drawn	RDC	
Checked	DL	
Approved	JGH	
Date	8/23/23	

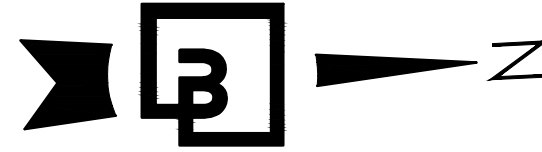
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**APPROVED**  
BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

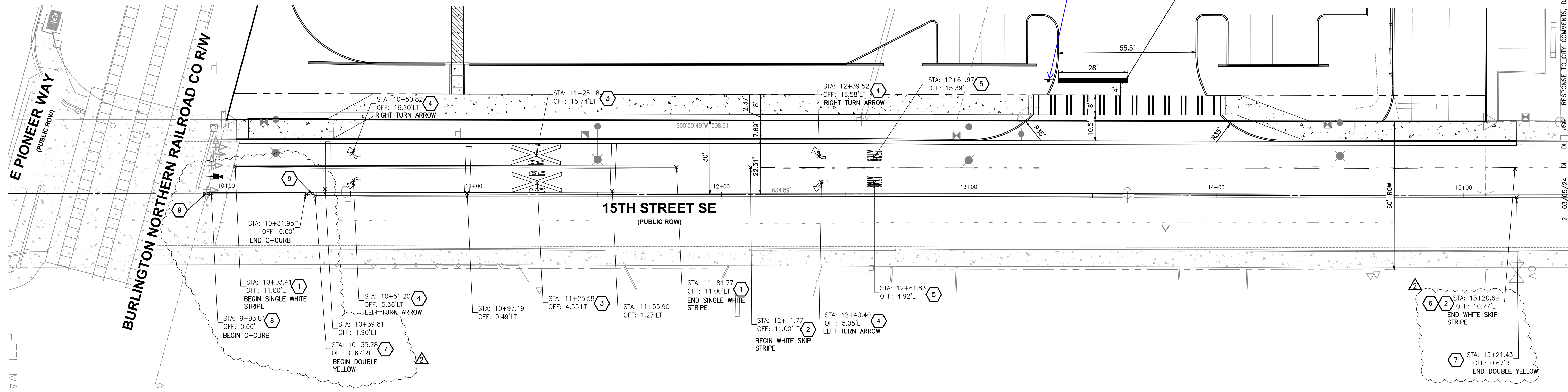
**811**  
Know what's below.  
Call before you dig.  
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Job Number: **22085**  
Sheet: **C18** of **34**

PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**CHANNELIZATION PLAN**



0 10' 20' 40'  
SCALE: 1"=20'



**PLAN VIEW**  
1"=20'

**CONSTRUCTION NOTES:**

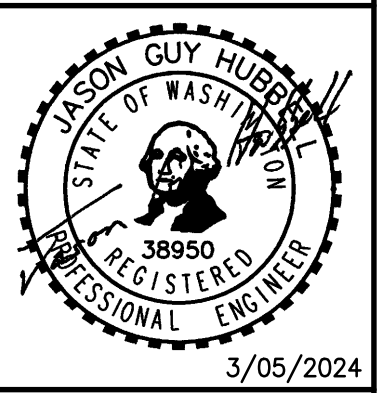
- NOTE: ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. LANE STRIPING SHALL BE MMA.
- 1 SOLID 8" WHITE THERMOPLASTIC GORE STRIPE
  - 2 WHITE SKIP STRIPE PER CITY OF PUYALLUP DETAIL 01.03.10
  - 3 RAILROAD CROSSING SYMBOLS PER CITY OF PUYALLUP DETAIL 01.03.12
  - 4 PAVEMENT ARROW SYMBOL PER CITY OF PUYALLUP DETAIL 01.03.14
  - 5 PAVEMENT MARKER 'ONLY' PER CITY OF PUYALLUP DETAIL 01.03.15
  - 6 MATCH INTO EXISTING PAVEMENT STRIPES
  - 7 SOLID YELLOW CENTER LANE MARKING (20") PER CITY OF PUYALLUP DETAIL 01.03.10
  - 8 INSTALL NEW MEDIAN C-CURB (TO MATCH EXISTING) AFTER PAVEMENT OVERLAY IS COMPLETE.
  - 9 INSTALL (2) NEW YELLOW DELINEATOR POSTS (TO MATCH EXISTING) AFTER PAVEMENT OVERLAY IS COMPLETE.

No.	Date	By	Chk.	Appr.	Revision
2	03/05/24	DL	DL	DL	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	12/06/23	DL	DL	DL	BID SET RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title:

**CHANNELIZATION PLAN**  
**FORTRESS - PUYALLUP**

FOR:  
**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Designed	DL	Drawn	RDC	Checked	DL	Approved	JGH	Date	8/23/23
Scale:		Horizontal	1"=20'	Vertical	N/A				

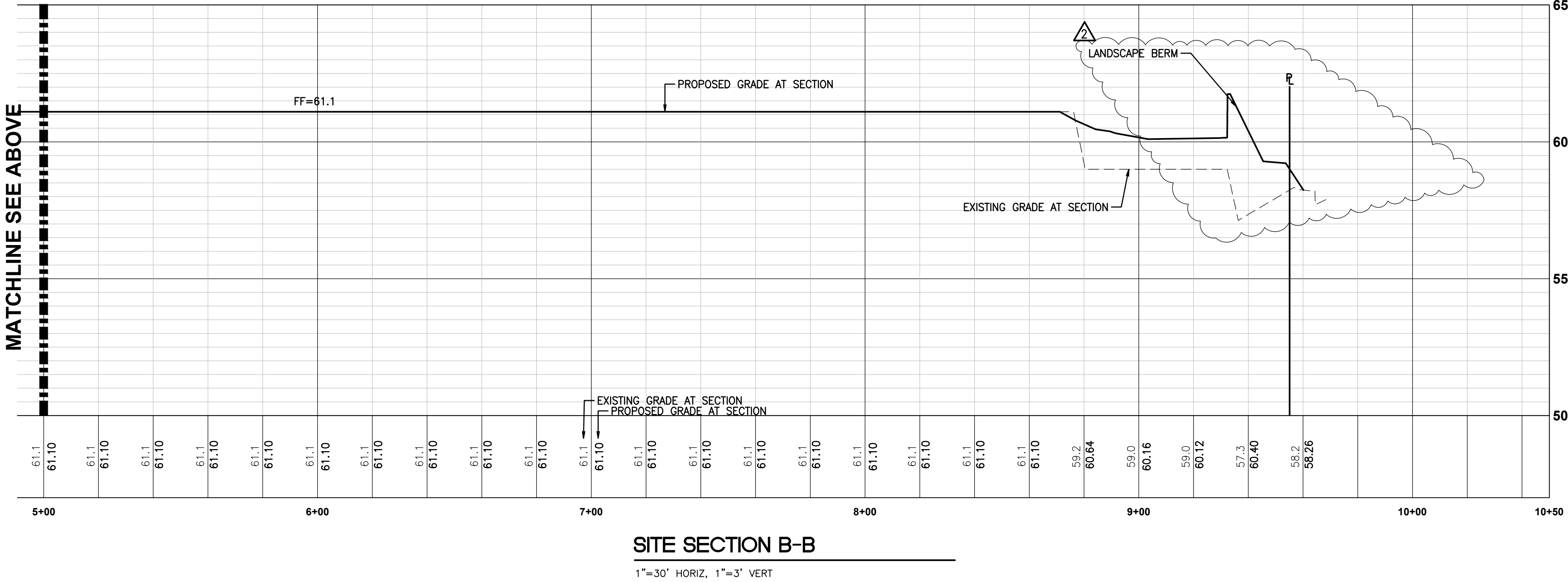
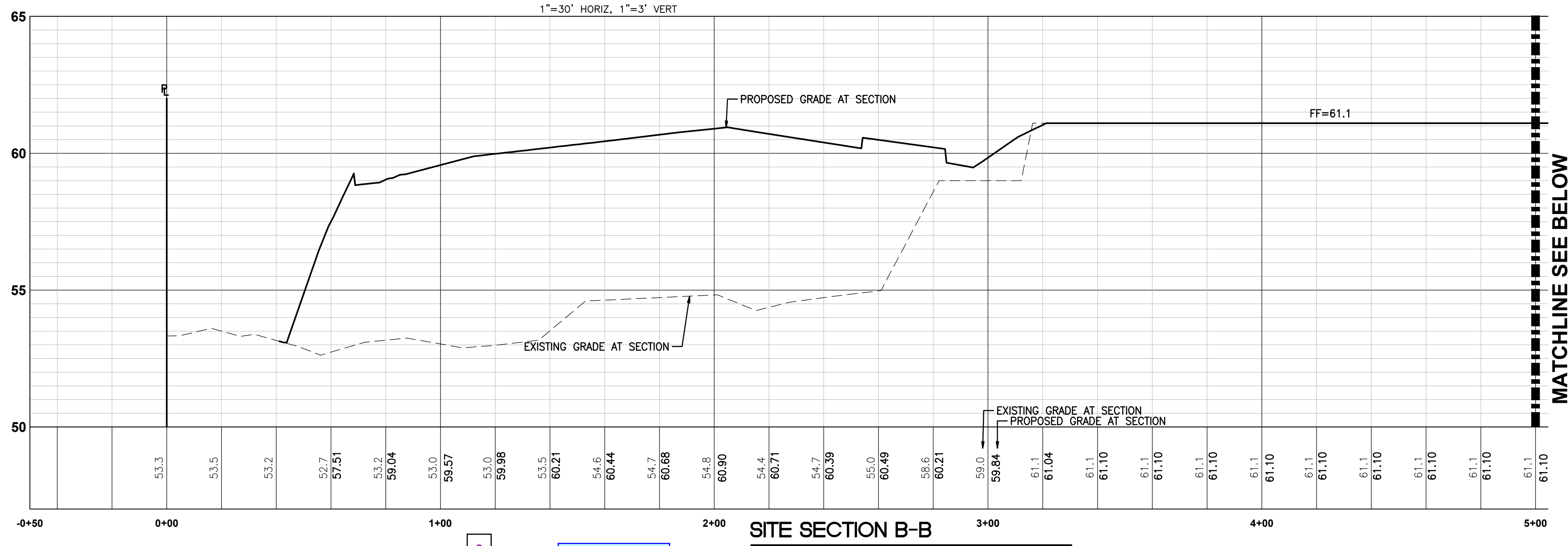
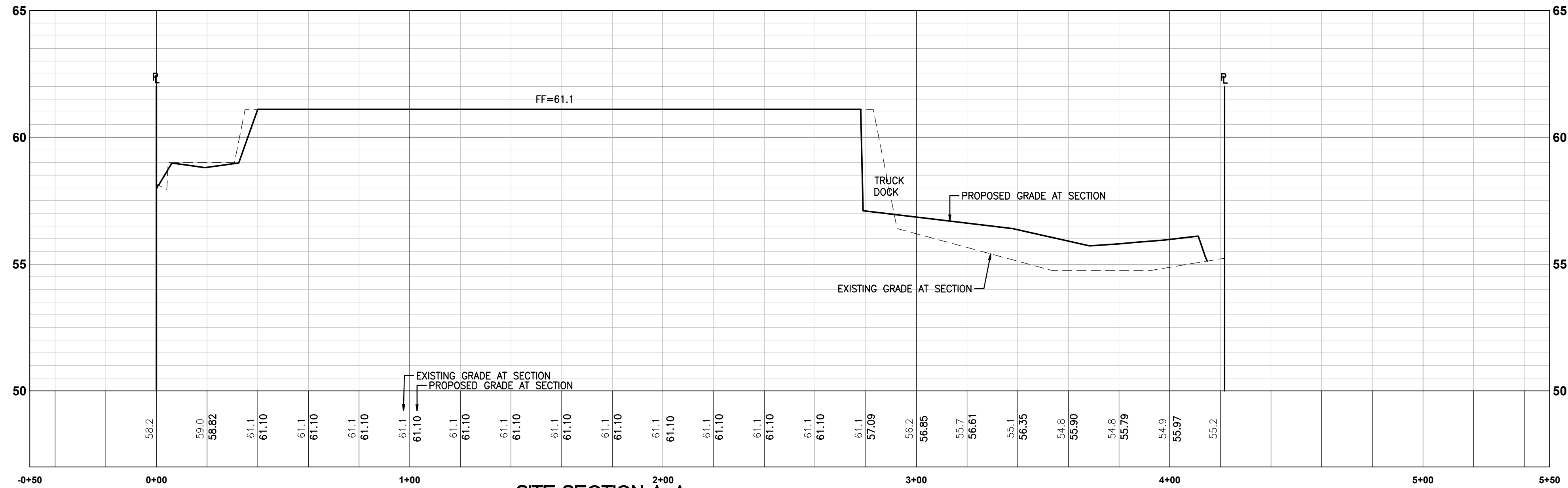
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**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL.  
DATE: \_\_\_\_\_  
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Job Number  
**22085**  
Sheet  
**C19** of **34**

# SITE SECTIONS



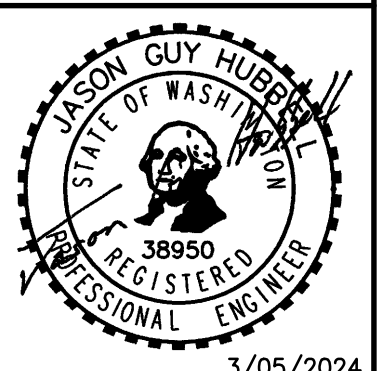
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No.	Date	By	Chd.	Appr.
2	03/05/24	DL	JSG	DL
				JSG
				DL
1	12/06/23	DL	JSG	DL
				JSG
				DL

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
BID SET  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title: **SITE SECTIONS**

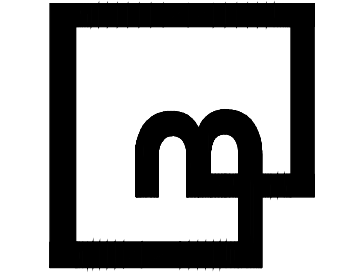
For: **CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Designed	DL	Drawn	RDC	Checked	DL	Approved	JGH	Date	8/23/23

Scale:  
Horizontal 1"=30'  
Vertical 1"=3'

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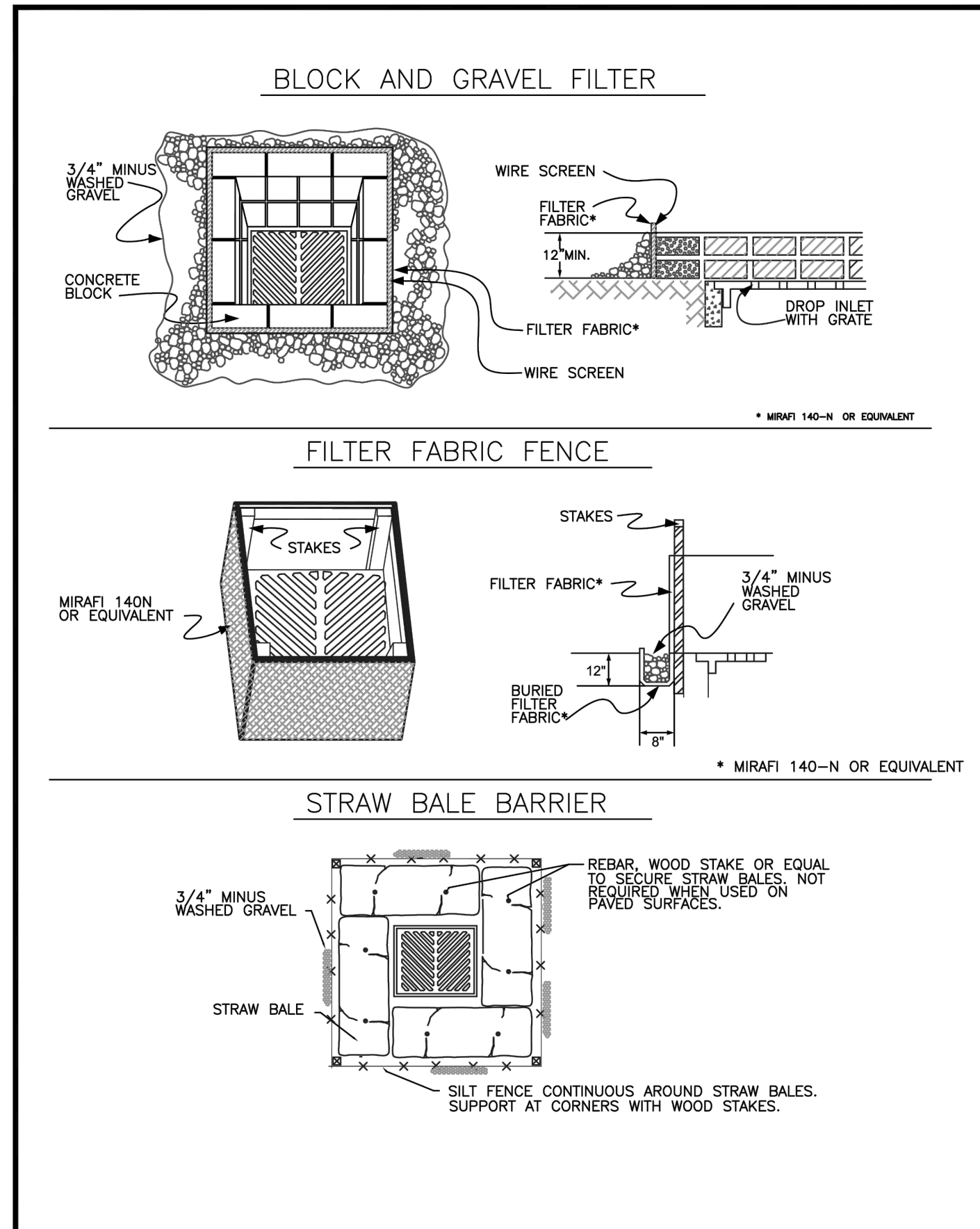
**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

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PORTION OF SE QUARTER OF SEC 27, TWN 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON  
**CONSTRUCTION NOTES AND DETAILS**



CONDITIONS WHERE PRACTICE APPLIES

- BLOCK AND GRAVEL FILTER - APPLICABLE FOR AREAS GREATER THAN 5% SLOPE.
- FILTER FABRIC FENCE - APPLICABLE WHERE THE INLET DRAINS A RELATIVELY SMALL (ONE ACRE OR LESS) AND FLAT AREA (LESS THAN 5% SLOPE).
- STRAW BALE BARRIER - APPLICABLE WHERE INLET DRAINS A RELATIVELY FLAT DISTURBED AREA (LESS THAN 5% SLOPE) IN WHICH SHEET FLOW (NOT EXCEEDING 0.3 FT/SEC) OCCURS. BARRIERS OF THIS TYPE SHOULD NOT BE PLACED AROUND INLETS RECEIVING CONCENTRATED FLOWS SUCH AS THOSE ALONG MAJOR STREETS AND HIGHWAYS.

**1. BLOCK AND GRAVEL FILTER - INSTALLATION PROCEDURE**

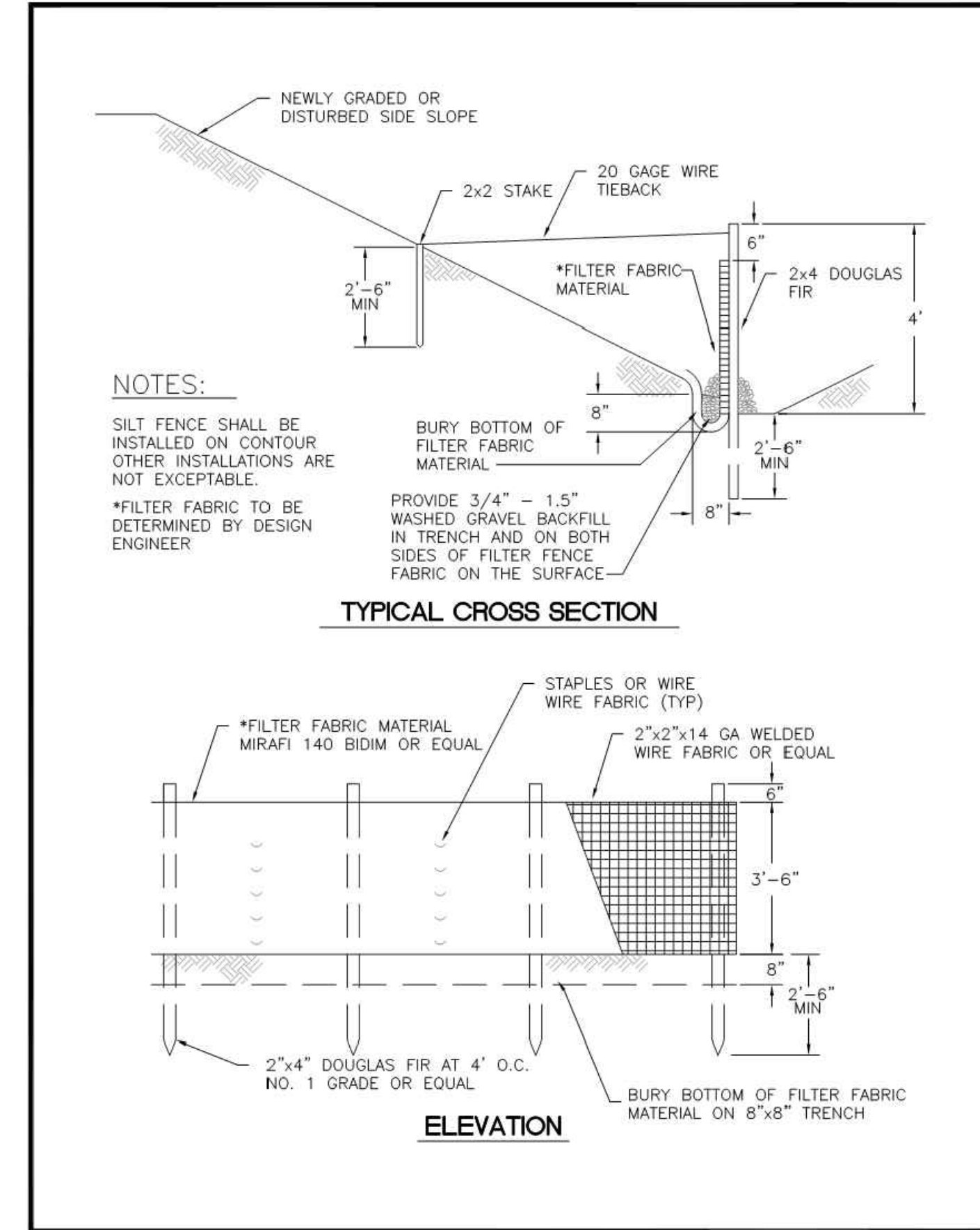
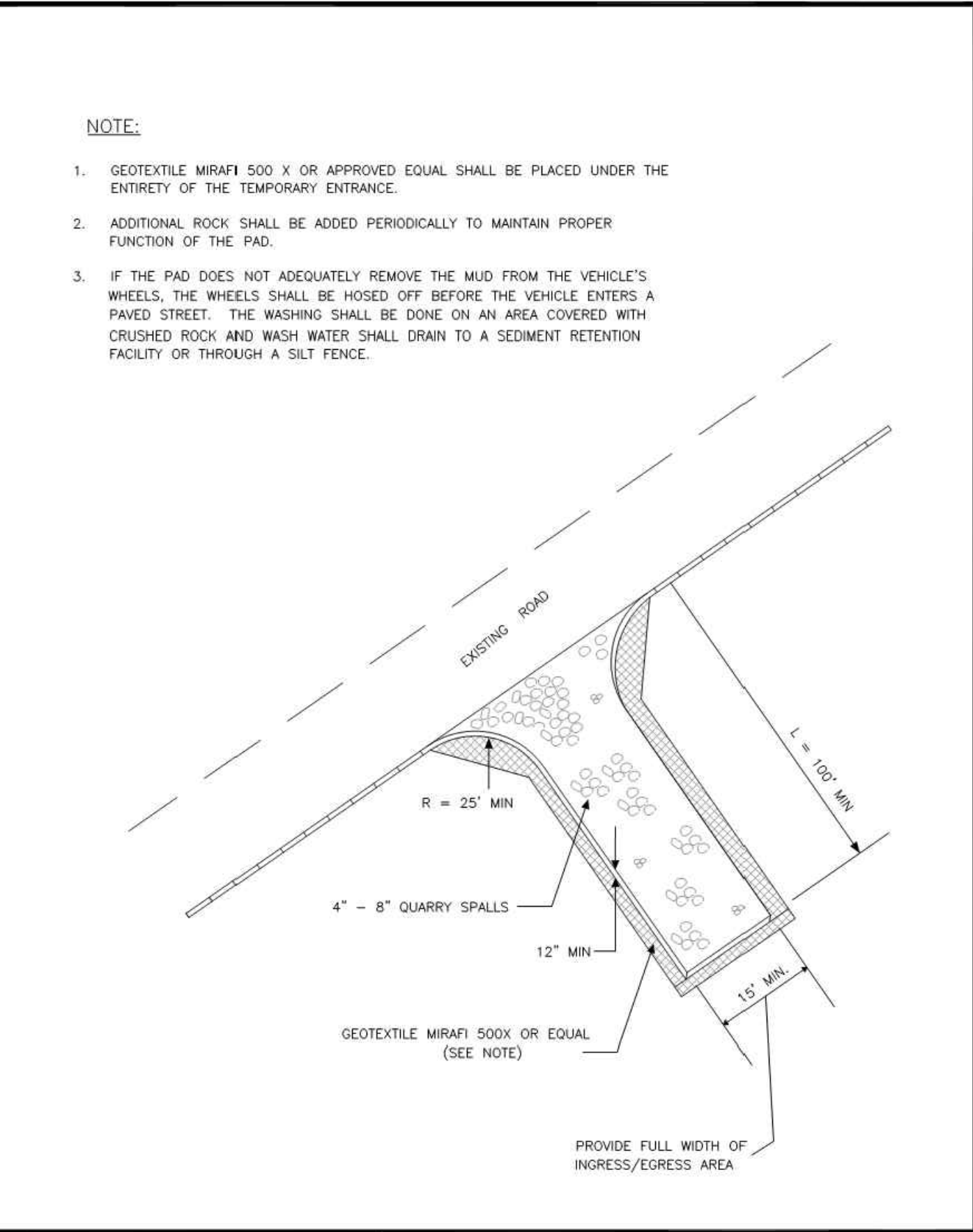
- PLACE WIRE MESH OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF ONE FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. USE WIRE SCREEN WITH 1/2-INCH OPENINGS. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS. PLACE FILTER FABRIC OVER WIRE MESH.
- PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, SO THAT THE OPEN ENDS FACE OUTWARD, NOT UPWARD. THE ENDS OF ADJACENT BLOCKS SHOULD ABUT. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF BLOCKS THAT ARE 4-INCH, 8-INCH AND 12-INCH WIDE. THE ROW OF BLOCKS SHOULD BE AT LEAST 12-INCHES BUT NO GREATER THAN 24-INCHES HIGH.
- PLACE WIRE SCREEN OVER THE OVERSIDE VERTICAL FACE (OPEN END) OF THE CONCRETE BLOCKS TO PREVENT STONES FROM BEING WASHED THROUGH THE BLOCKS. USE WIRE SCREEN WITH 1/2-INCH OPENINGS.
- PILE STONES AGAINST THE WIRE MESH TO THE TOP OF THE BLOCKS. USE 3/4" MINUS WASHED GRAVEL.

**2. FILTER FABRIC FENCE - INSTALLATION PROCEDURE**

- PLACE 2-INCH BY 2-INCH WOODEN STAKES AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND DRIVE THEM AT LEAST 8-INCHES INTO THE GROUND. THE STAKES MUST BE AT LEAST 3 FEET LONG.
- EXCAVATE A TRENCH APPROXIMATELY 8-INCHES WIDE AND 12-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.
- STAPLE THE FILTER FABRIC\* TO THE WOODEN STAKES SO THAT 32-INCHES OF THE FABRIC EXTENDS AND CAN BE FORMED INTO THE TRENCH, AND USE HEAVY-DUTY WIRE STAPLES AT LEAST 1/2-INCHES LONG.
- BACKFILL THE TRENCH WITH 3/4-INCH MINUS WASHED GRAVEL ALL THE WAY AROUND.

**3. STRAW BALE BARRIER - INSTALLATION PROCEDURE**

- EXCAVATE A 4-INCH DEEP TRENCH AROUND THE INLET. MAKE THE TRENCH AS WIDE AS A STRAW BALE.
- ORIENT STRAW BALES WITH THE BINDINGS AROUND THE SIDES OF THE BALES RATHER THAN OVER AND UNDER THE BALES.
- PLACE BALES LENGTHWISE AROUND THE INLET AND PRESS THE ENDS OF ADJACENT BALES SECURELY IN PLACE.
- DRIVE TWO 2-INCH BY 2-INCH STAKES THROUGH EACH BALE TO ANCHOR THE BALE SECURELY IN PLACE.
- BACKFILL THE EXCAVATED SOIL AND COMPACT IT AGAINST THE BALE.
- WEDGE LOOSE STRAW BETWEEN BALES TO PREVENT WATER FROM FLOWING BETWEEN BALES.

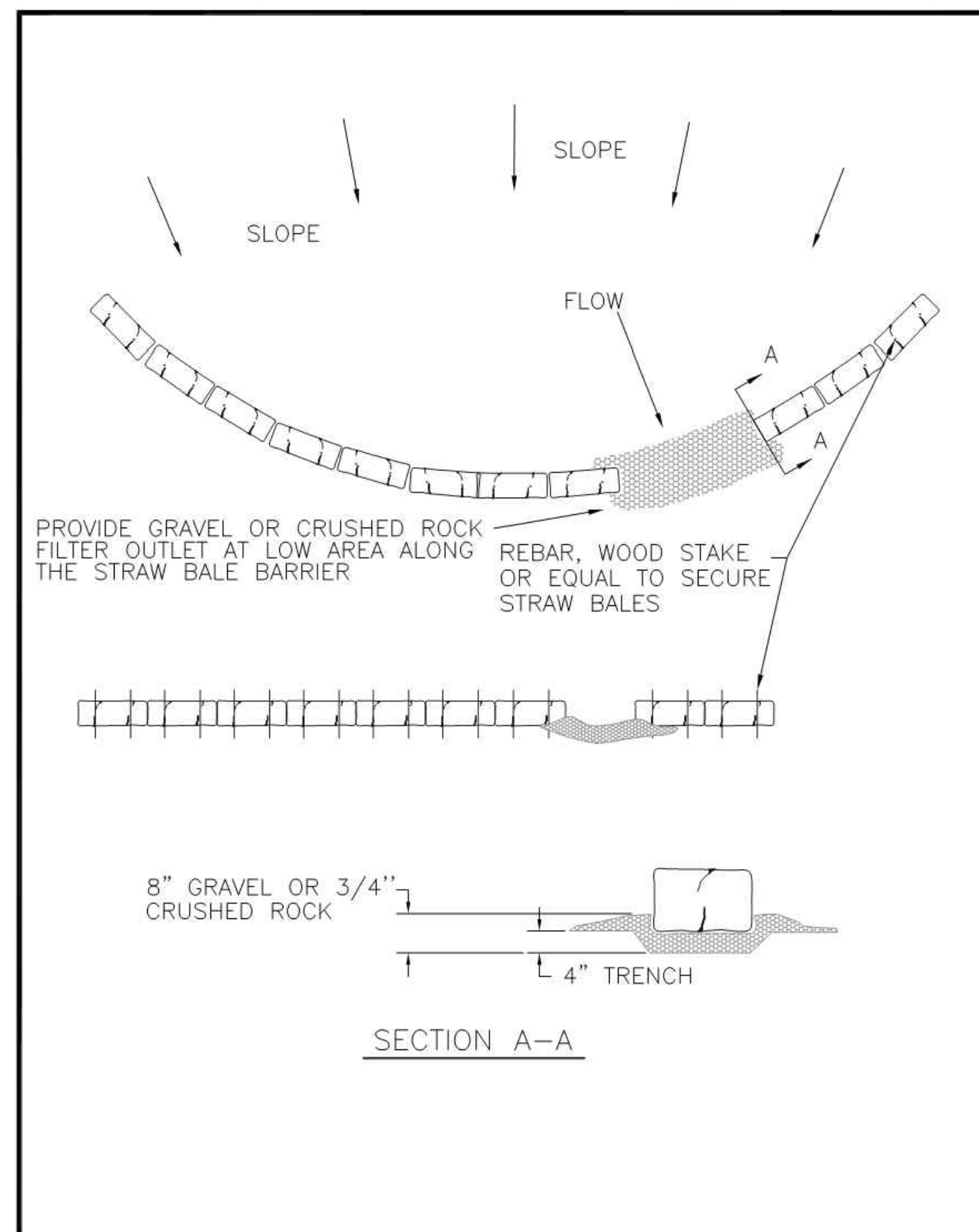


CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STORM DRAIN BARRIERS		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_020305	DATE APPROVED: 02/03/24	DATE REVISION: 02/03/24	SCALE: 1"=1'-0"	02.03.05

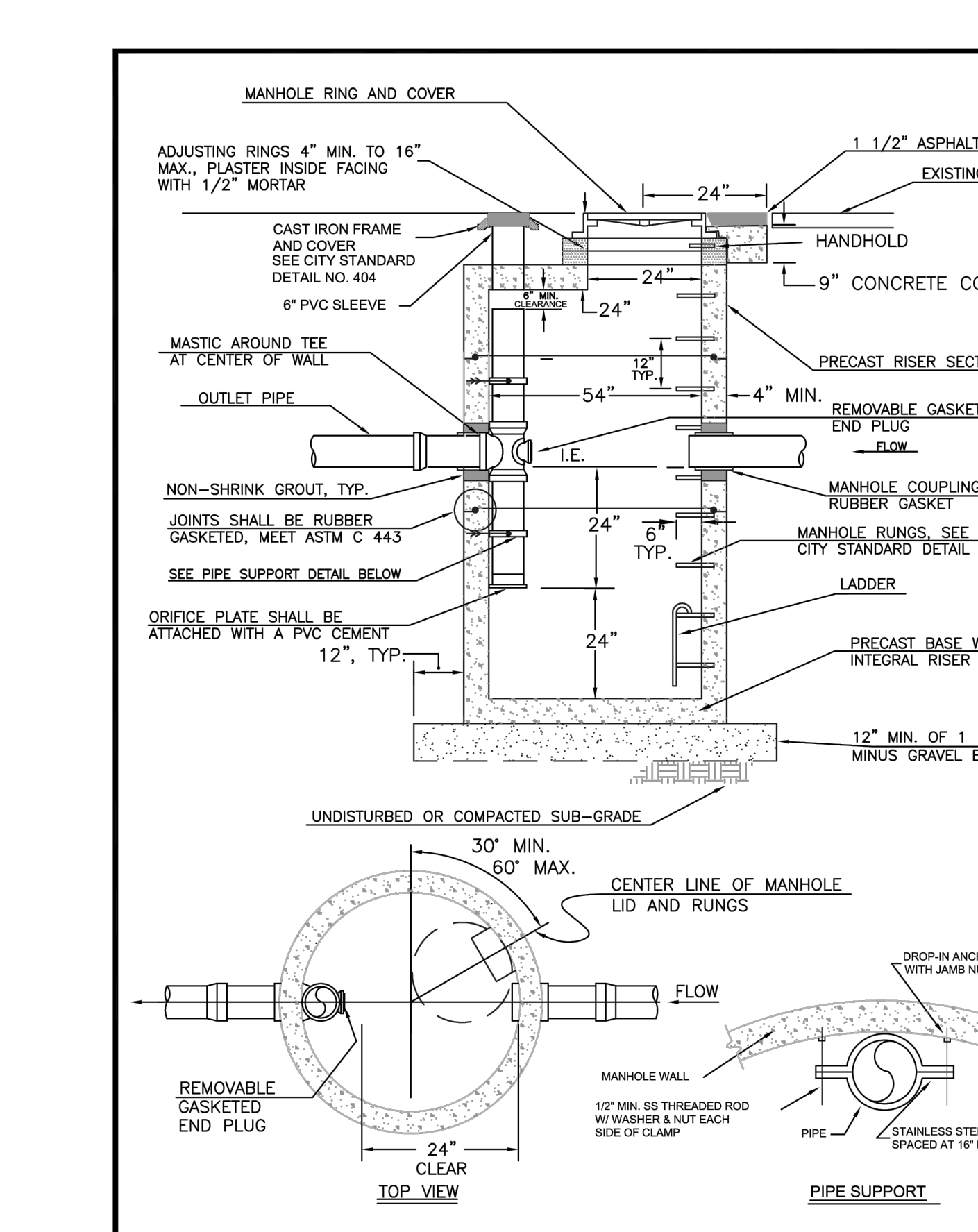
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STORM DRAIN BARRIERS NOTES		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_020306	DATE APPROVED: 02/03/24	DATE REVISION: 02/03/24	SCALE: 1"=1'-0"	02.03.06

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	TEMPORARY CONSTRUCTION ENTRANCE		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_050101	DATE APPROVED: 05/01/24	DATE REVISION: 05/01/24	SCALE: 1"=1'-0"	05.01.01

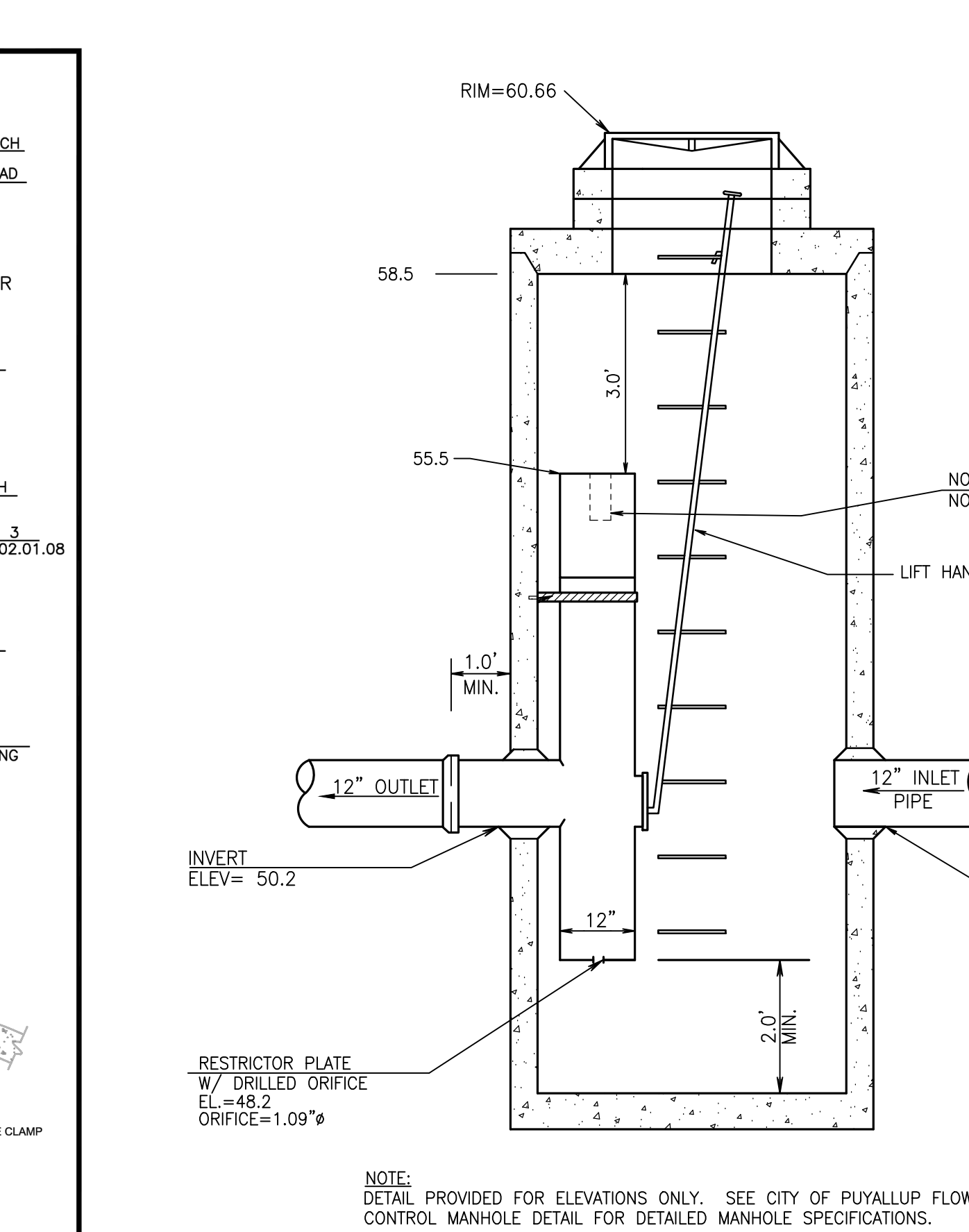
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	SILTATION FENCE		CITY STANDARD	
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FILE NAME: P:\PROJECTS\2024\CITY\202404_020302	DATE APPROVED: 02/03/24	DATE REVISION: 02/03/24	SCALE: 1"=1'-0"	02.03.02



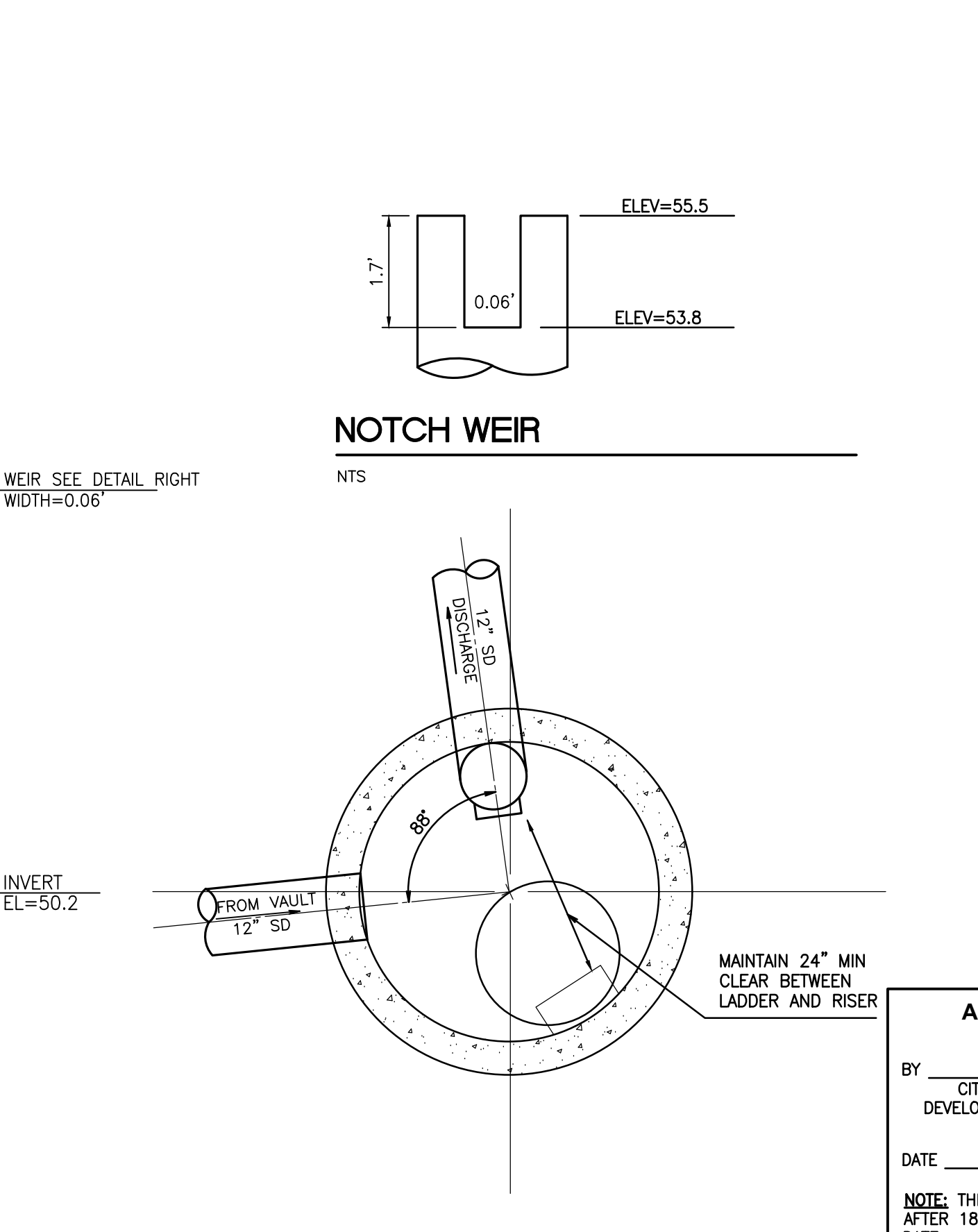
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	BARRIER WITH GRAVEL OUTLET		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_020304	DATE APPROVED: 02/03/24	DATE REVISION: 02/03/24	SCALE: 1"=1'-0"	02.03.04



CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	FLOW CONTROL MANHOLE WITH FLAT TOP		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_020102	DATE APPROVED: 02/01/24	DATE REVISION: 02/01/24	SCALE: 1"=1'-0"	02.01.02



CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	SDMH #1 CONTROL STRUCTURE TYPE 2-54'		CITY STANDARD	
	DESIGNED BY: LINDA LANNING	CHECKED BY: LINDA LANNING	APPROVED BY: COLLEEN HARRIS	REVISIONS: NONE
FILE NAME: P:\PROJECTS\2024\CITY\202404_020101	DATE APPROVED: 02/01/24	DATE REVISION: 02/01/24	SCALE: 1"=1'-0"	02.01.01



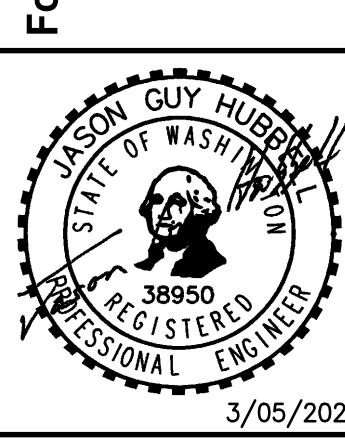
CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	APPROVED		CITY STANDARD	
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FILE NAME: P:\PROJECTS\2024\CITY\202404_020303	DATE APPROVED: 02/03/24	DATE REVISION: 02/03/24	SCALE: 1"=1'-0"	02.03.03

2	03/05/24	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	12/06/23	DL	JSG	BID SET RESPONSE TO CITY COMMENTS, DATED 10-06-2023
No.	Date	By	Clkd.	Appr.

Title: **CONSTRUCTION NOTES AND DETAILS**

Revision

For: **CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

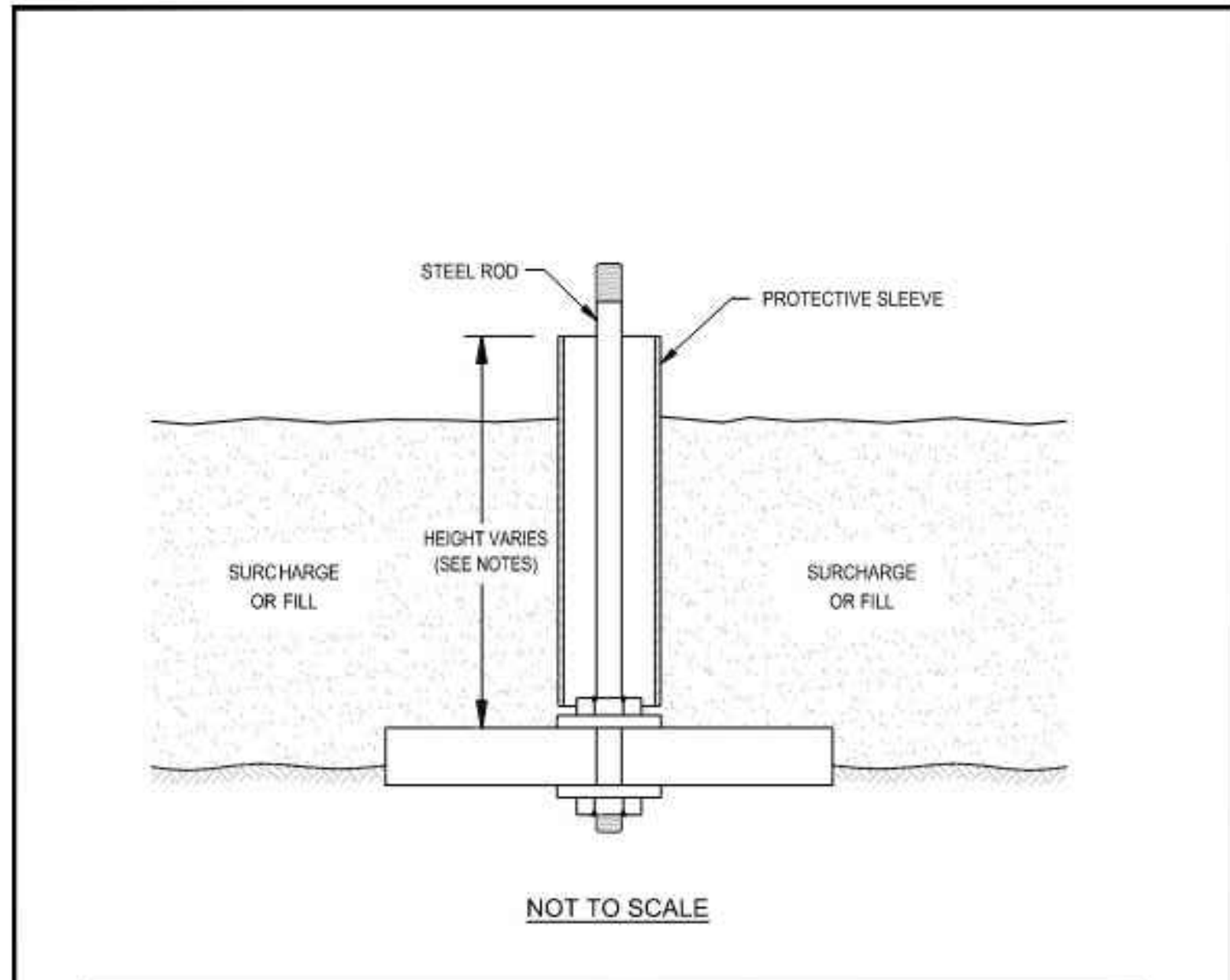


Scale:	Horizontal	Vertical
Designed	DL	8/23/23
Drawn	RCC	
Checked	DL	
Approved	JGH	
Date		8/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

Job Number	22085
Sheet	C21 of 34

# CONSTRUCTION DETAILS



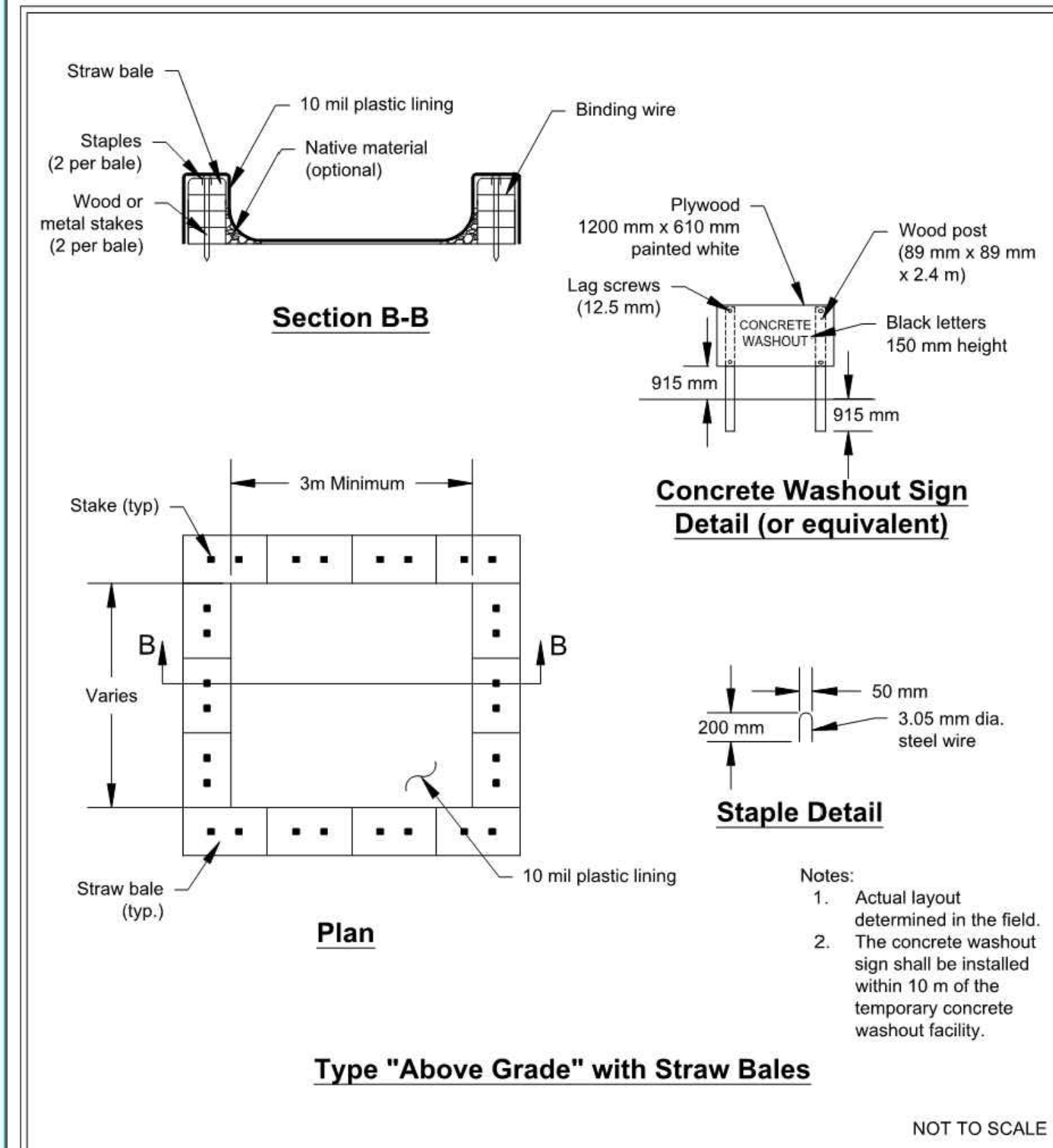
**NOTES:**

1. BASE CONSISTS OF 3/4" THICK, 2'x2' PLYWOOD WITH CENTER DRILLED 5/8" DIAMETER HOLE.
2. BEDDING MATERIAL, IF REQUIRED, SHOULD CONSIST OF CLEAN COARSE SAND.
3. MARKER ROD IS 1/2" DIAMETER STEEL ROD THREADED AT BOTH ENDS.
4. MARKER ROD IS ATTACHED TO BASE BY NUT AND WASHER ON EACH SIDE OF BASE.
5. PROTECTIVE SLEEVE SURROUNDING MARKER ROD SHOULD CONSIST OF 2" DIAMETER PLASTIC TUBING. SLEEVE IS NOT ATTACHED TO ROD OR BASE.
6. ADDITIONAL SECTIONS OF STEEL ROD CAN BE CONNECTED WITH THREADED COUPLINGS.
7. ADDITIONAL SECTIONS OF PLASTIC PROTECTIVE SLEEVE CAN BE CONNECTED WITH PRESS-FIT PLASTIC COUPLINGS.
8. STEEL MARKER ROD SHOULD EXTEND AT LEAST 6" ABOVE TOP OF PLASTIC PROTECTIVE SLEEVE.
9. PLASTIC PROTECTIVE SLEEVE SHOULD EXTEND AT LEAST 1" ABOVE TOP OF FILL SURFACE.

**Terra Associates, Inc.**  
Consultants in Geotechnical Engineering  
Geology and  
Environmental Earth Sciences.

**TYPICAL SETTLEMENT MARKER DETAIL**  
240 - 15TH STREET SE INDUSTRIAL  
PUYALLUP, WASHINGTON

Proj. No. T-8661    Date JAN 2022    Figure 3



**Figure II-4.1.7b**  
**Concrete Washout Area**

Revised June 2015

DEPARTMENT OF ECOLOGY  
State of Washington

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**MATERIALS OF CONSTRUCTION**

**FABRIC:** NEEDLE PUNCHED NON-WOVEN GEOTEXTILE MATERIAL. FABRIC IS RESISTANT TO ULTRAVIOLET AND BIOLOGICAL DEGRADATION AND A BROAD RANGE OF CHEMICALS.

**APPARENT OPENING SIZE (AOS):** 80 US STANDARD SIEVE (0.180 MM)

**GRAB TENSILE STRENGTH:** 200 LBS

**PUNCTURE STRENGTH:** 130 LBS

**MULLEN BURST:** 400 PSI

**TRAPEZOIDAL TEAR:** 85 LBS

**WATER FLOW RATE:** 110 GPM/FT2

**PERMEABILITY:** 0.38 CM/SECOND

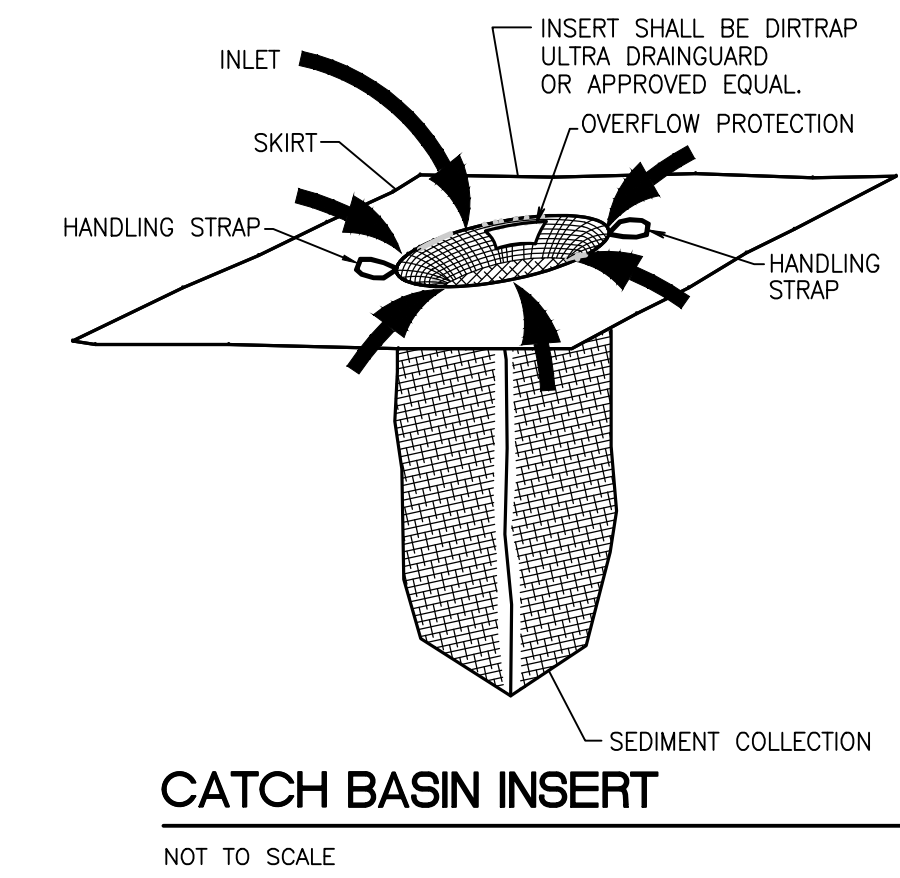
**DIMENSIONS:**

**SKIRT:** 24"x36"

**SOCK FILTER/SEPARATOR:** 10" D x 24" L

**DISPOSAL REQUIREMENTS:**

CONSULT FEDERAL, STATE, AND LOCAL REGULATIONS FOR DISPOSAL OF INSERTS

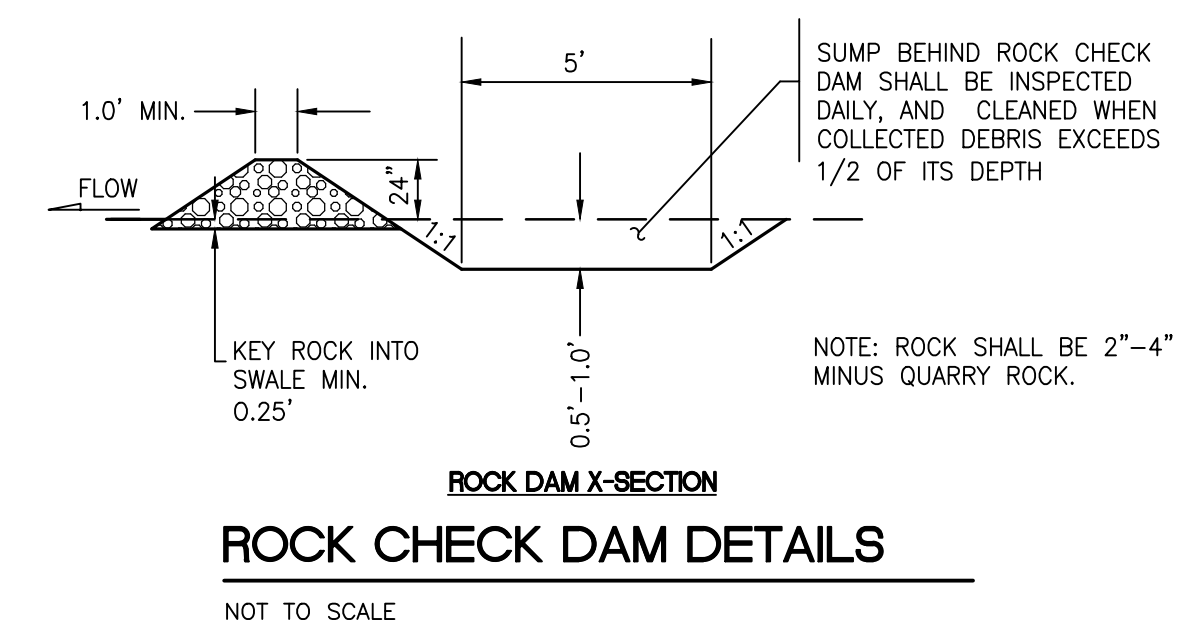
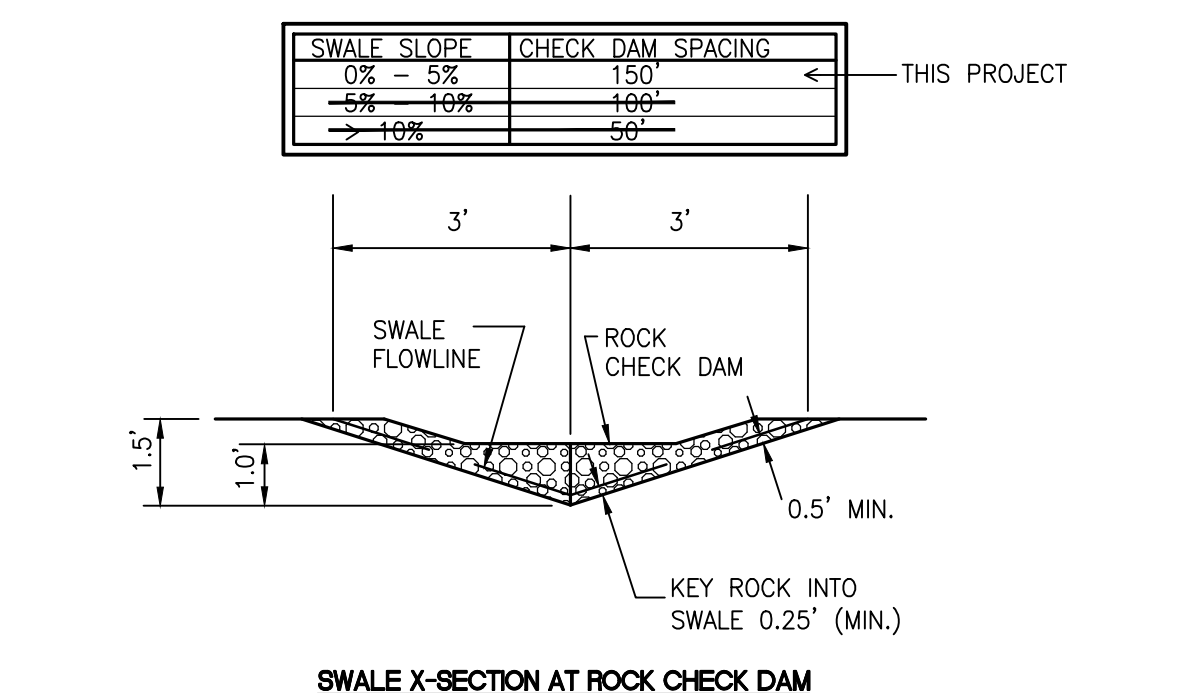
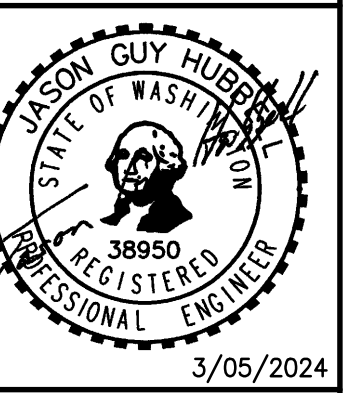


No.	Date	By	Chk.	Appr.	Revision
2	03/05/24	DL	JSG		RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	02/27/24	DL	JSG		BID SET
1	12/06/23	DL	JSG		RESPONSE TO CITY COMMENTS, DATED 10-06-2023

**CONSTRUCTION DETAILS**

**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



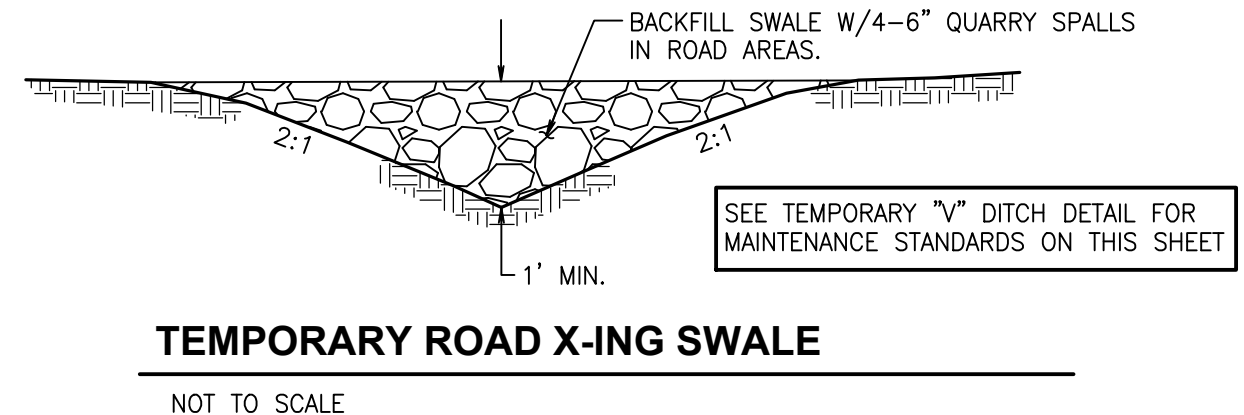
**RIP RAP PROTECTION SPECIFICATIONS**

**NOT TO SCALE**

ALL RIP RAP PADS SHALL BE THE WIDTH OF THE PIPE PLUS 6' WIDE X 8' LONG X 1' DEEP, USING THE GRADATION SPECIFIED BELOW: (UNLESS OTHERWISE SPECIFIED), EXTEND ROCK TO 1' ABOVE CROWN OF OUTLET PIPE.

RIP RAP TO BE QUARRY SPALLS WITH ROCK GRADATION AS FOLLOWS:

- PASSING 8-INCH SQUARE SIEVE: 100%
- PASSING 3-INCH SQUARE SIEVE: 40%-60%
- PASSING 3/4-INCH SQUARE SIEVE: 0-10%



ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
3. USE COMPOST AND OTHER MATERIALS THAT MEET THE FOLLOWING ORGANIC CONTENT REQUIREMENTS:
  - 3.1. THE ORGANIC CONTENT FOR PRE-APPROVED AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BMP 17.30: BIORETENTION, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDUS OR MANURE.
 

THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1.

THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
  - 3.2. THE CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

THE RESULTING SOIL SHOULD BE CONDUCTIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

**BMP T5.13**  
**POST-CONSTRUCTION SOIL QUALITY AND DEPTH**

**NOT TO SCALE**

**IMPLEMENTATION OPTIONS**

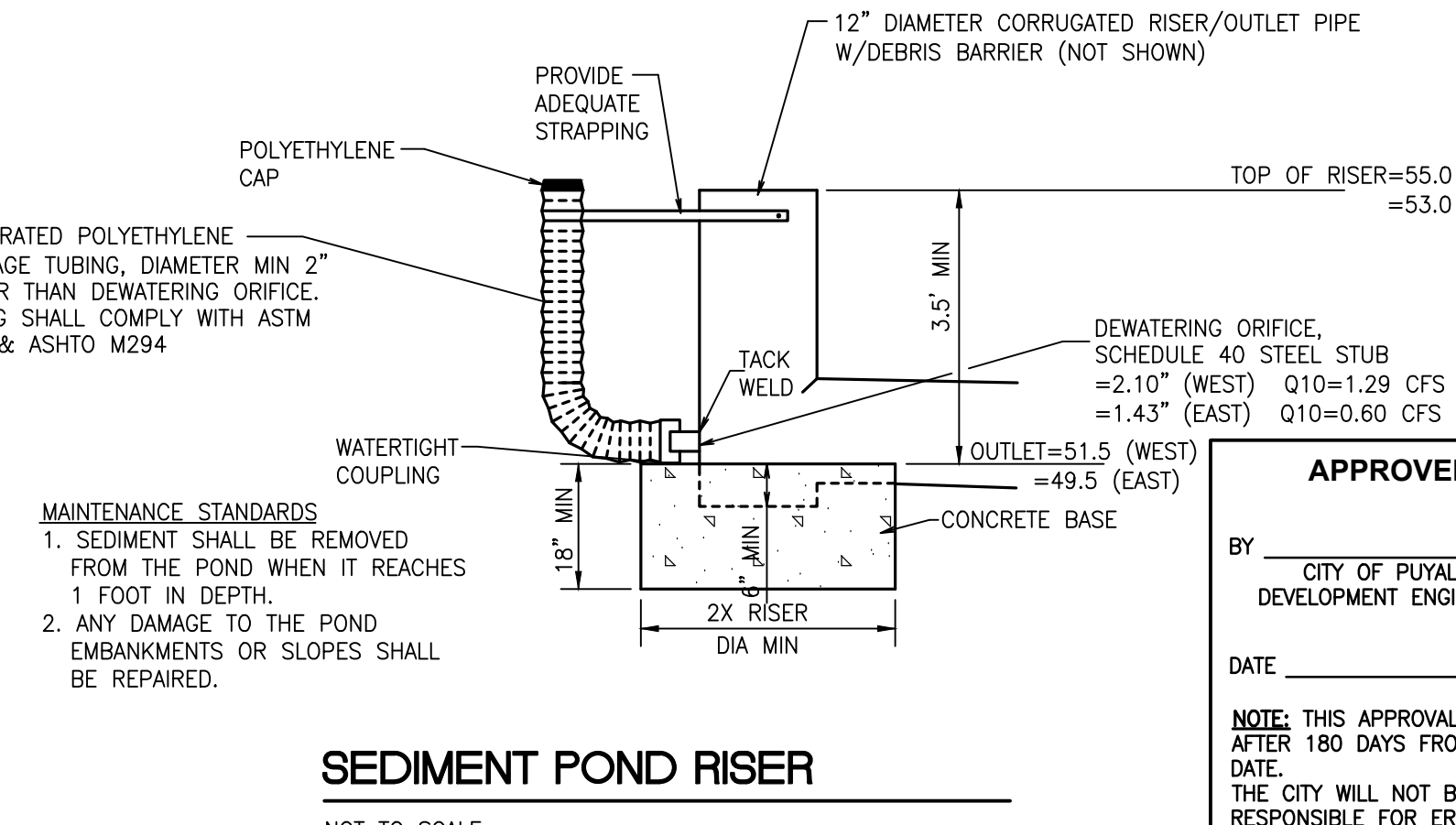
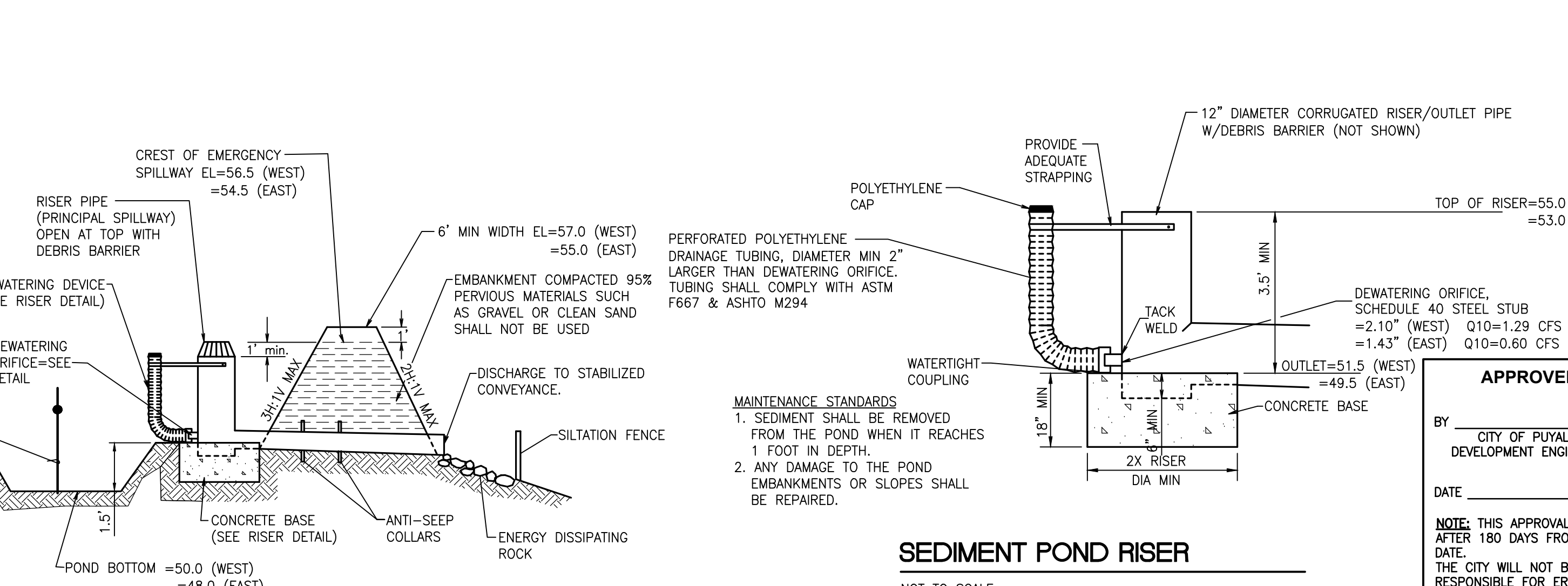
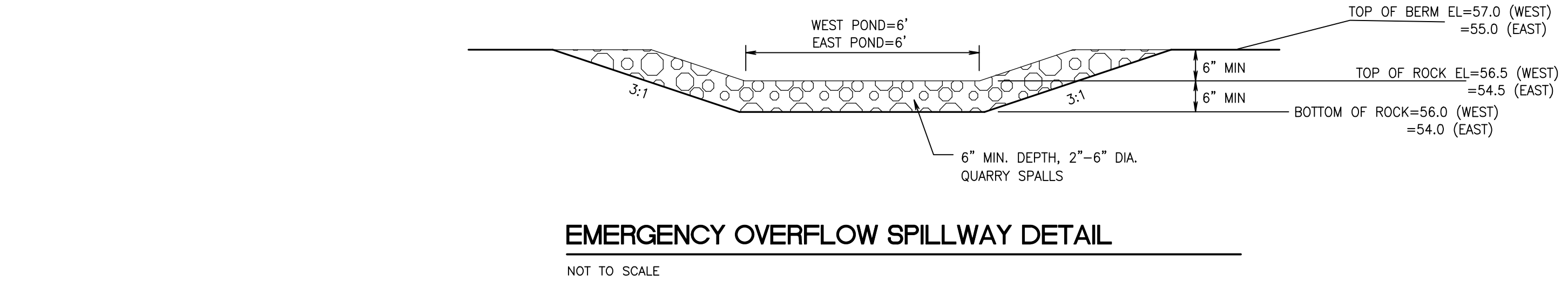
THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW: LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.

AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.

STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.

IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.



**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

Scale: Horizontal \_\_\_\_\_ Vertical \_\_\_\_\_

Designed: \_\_\_\_\_  
Drawn: \_\_\_\_\_  
Checked: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Date: 8/23/23

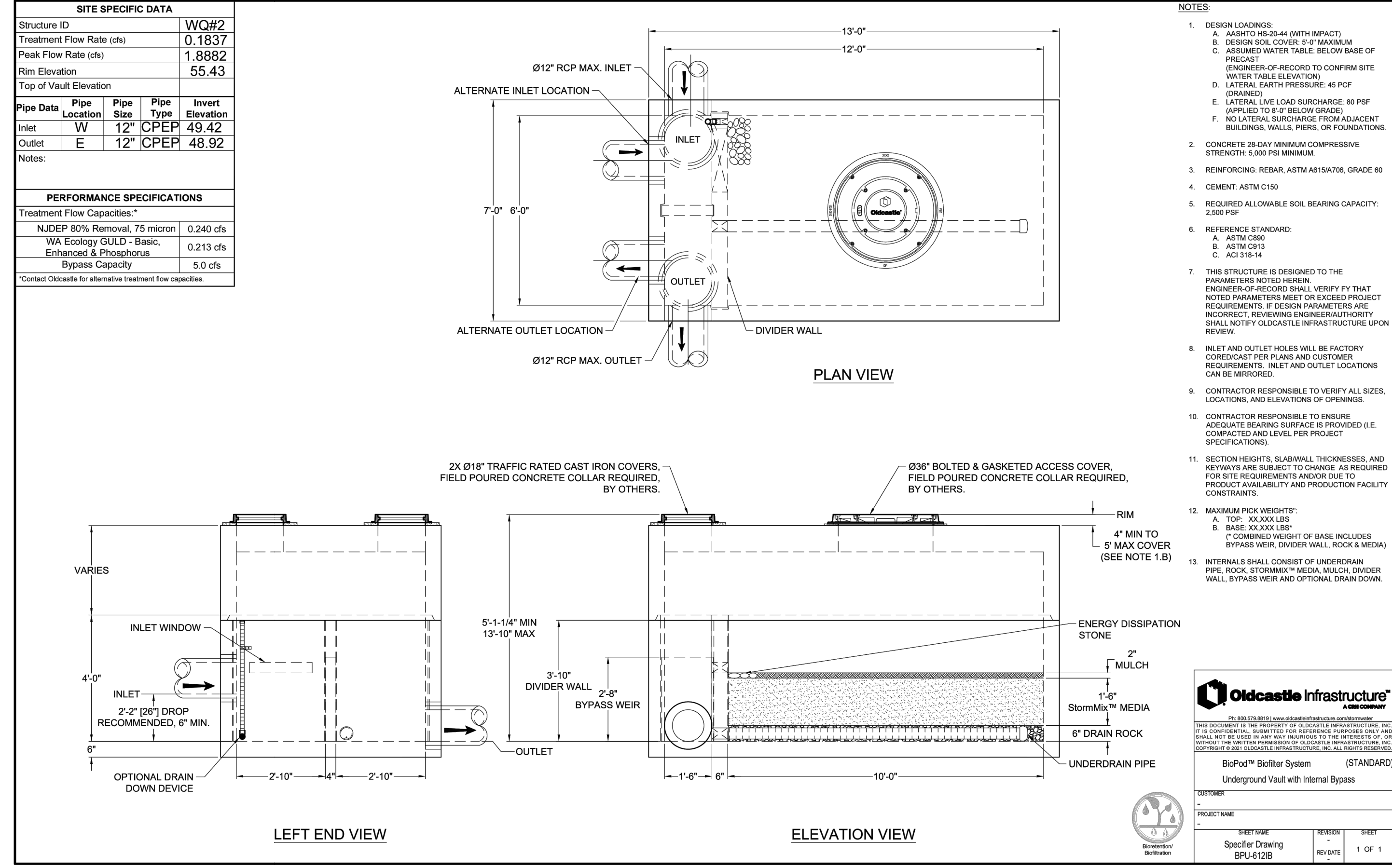
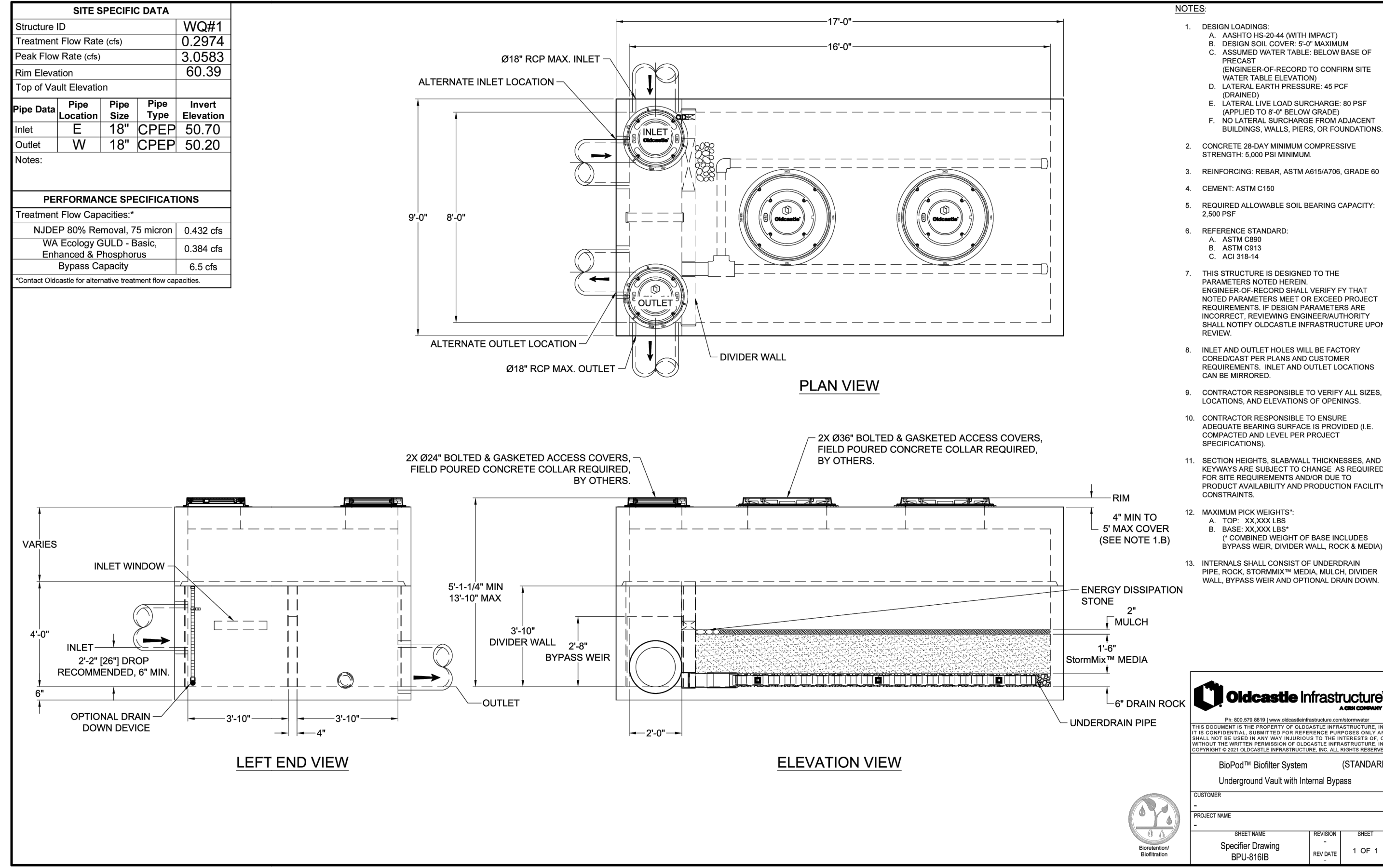
**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
[barghausen.com](http://barghausen.com)

Job Number: **22085**

Sheet: **C22** of **34**

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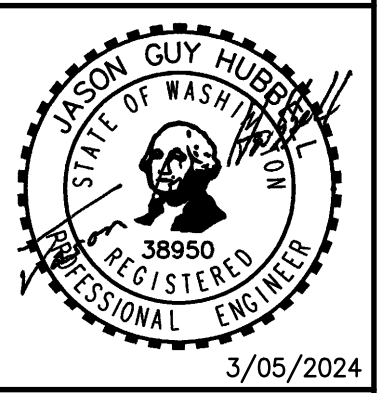
# CONSTRUCTION DETAILS



No.	Date	By	Appr.	Response to City Comments
1	12/06/23	DL	DL	JSG BID SET
2	03/05/24	DL	DL	JSG RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024

**CONSTRUCTION DETAILS**  
**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



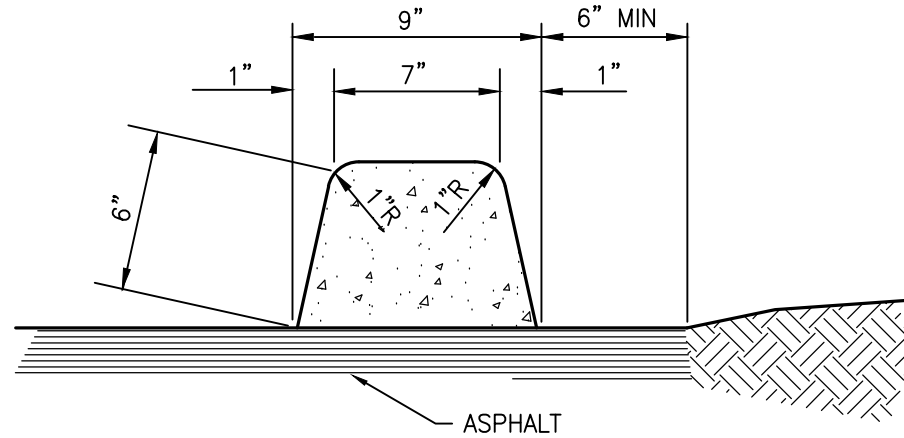
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Designed	DL	
Drawn	RDC	
Checked	DL	
Approved	JGH	
Date	8/23/23	

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Kent, WA 98032  
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Job Number: **22085**  
Sheet: **C23** of **34**

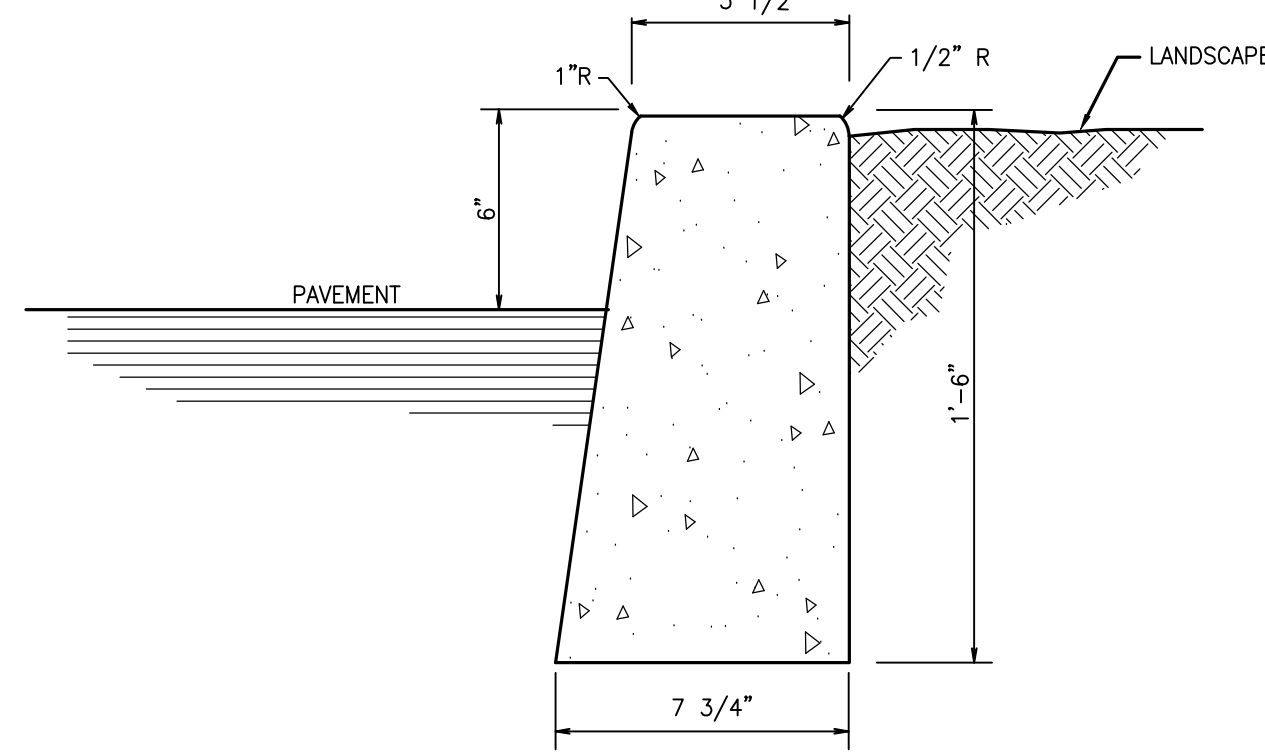
**APPROVED**  
BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.  
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

# CONSTRUCTION DETAILS



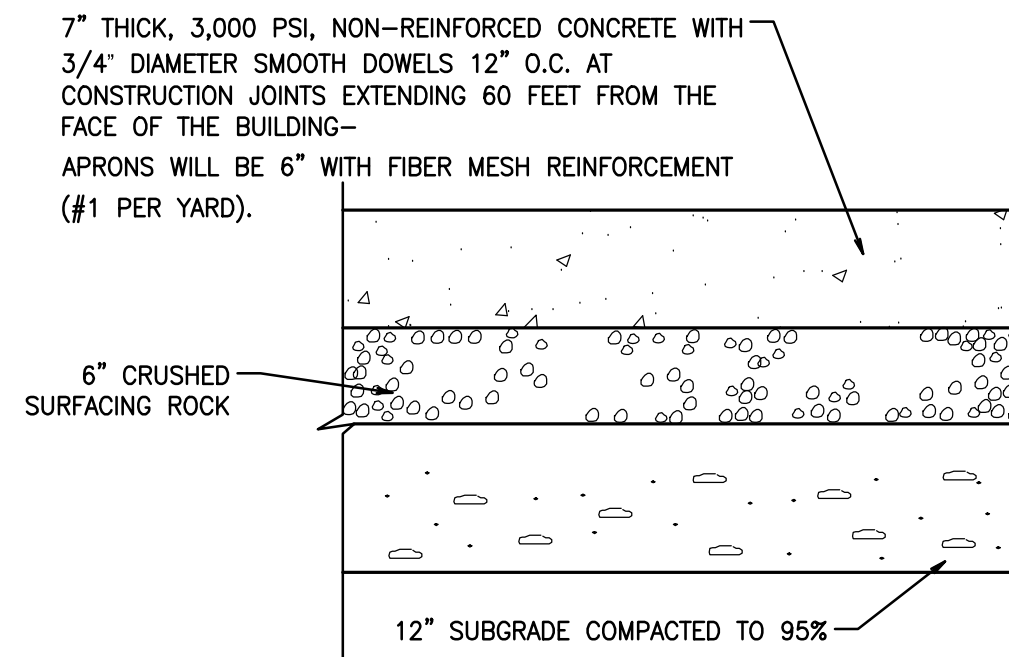
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EXTRUDED CONCRETE CURB DETAIL**

NOT TO SCALE



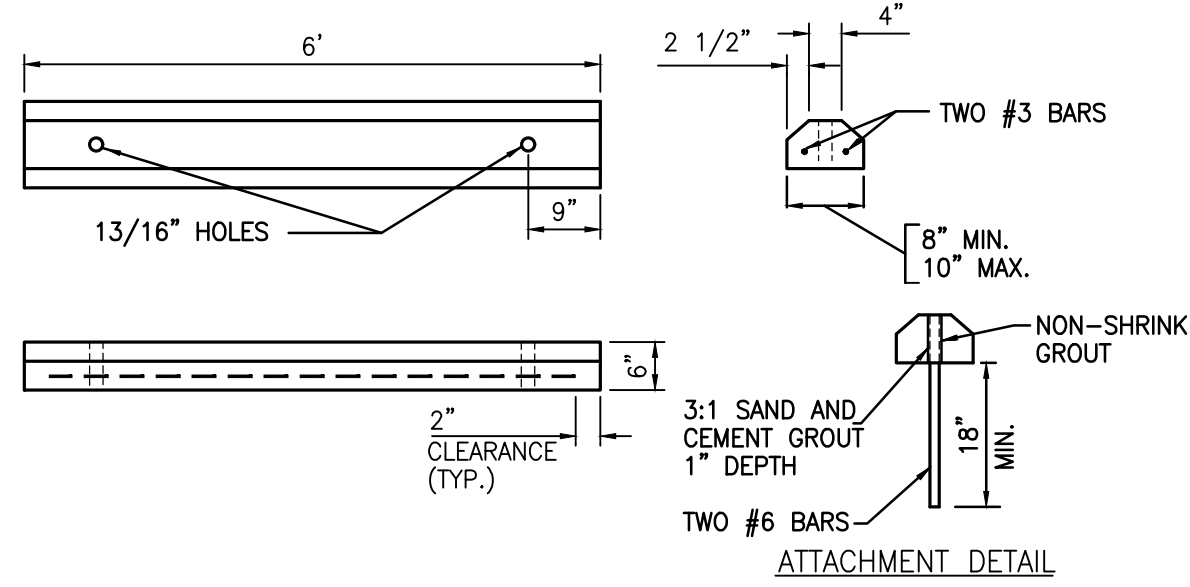
**PRIVATE ON-SITE  
VERTICAL CURB DETAIL**

NOT TO SCALE



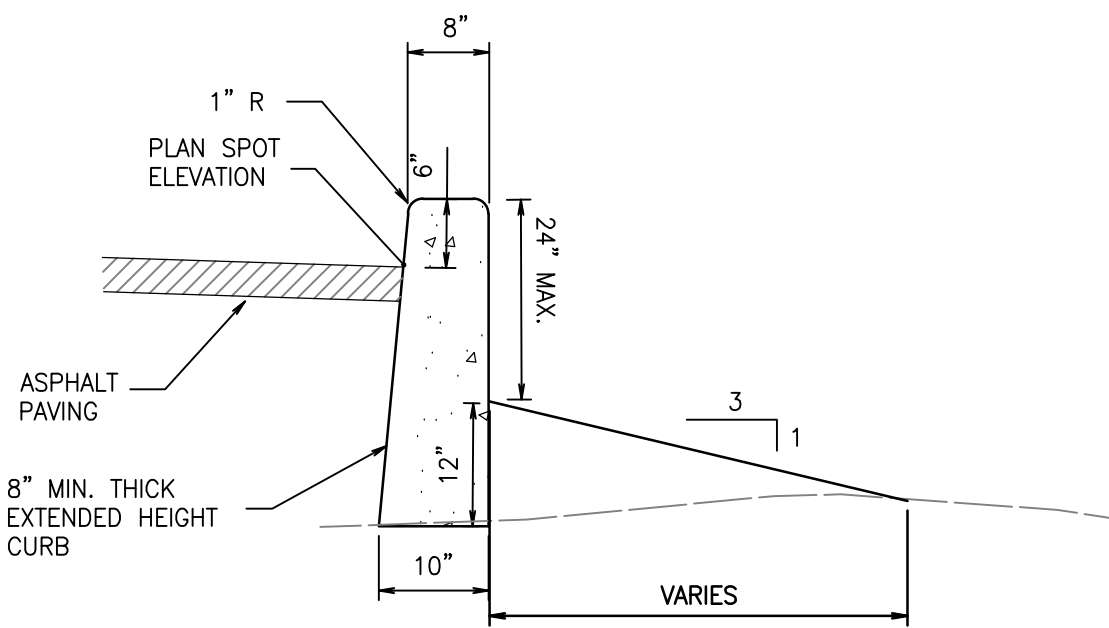
**HEAVY DUTY CONCRETE PAVEMENT SECTION**

NOT TO SCALE (PER OWNER SPECIFICATIONS)



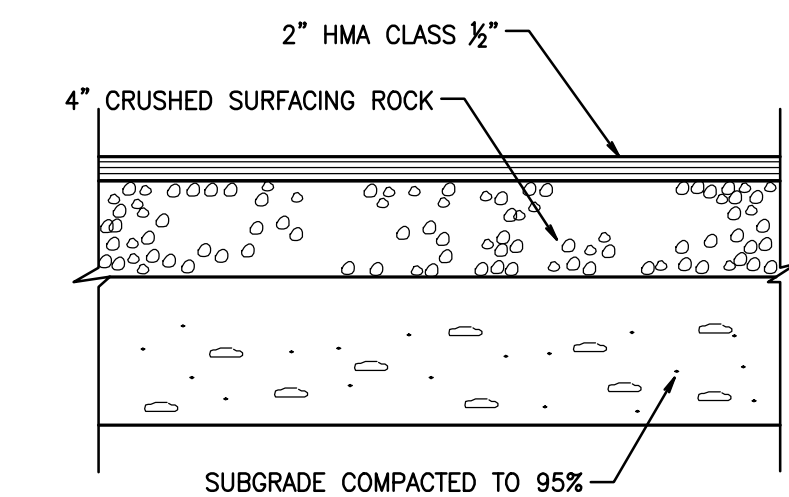
**CONCRETE WHEEL STOP**

NOT TO SCALE



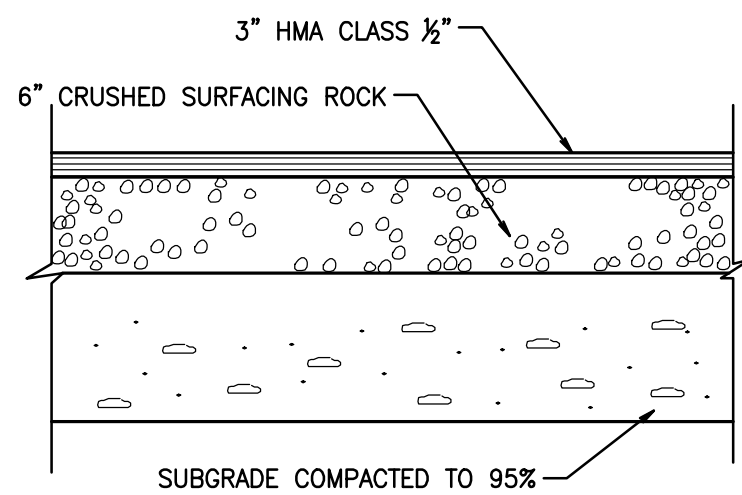
**PRIVATE ON-SITE  
EXTENDED HEIGHT CURB DETAIL**

NOT TO SCALE



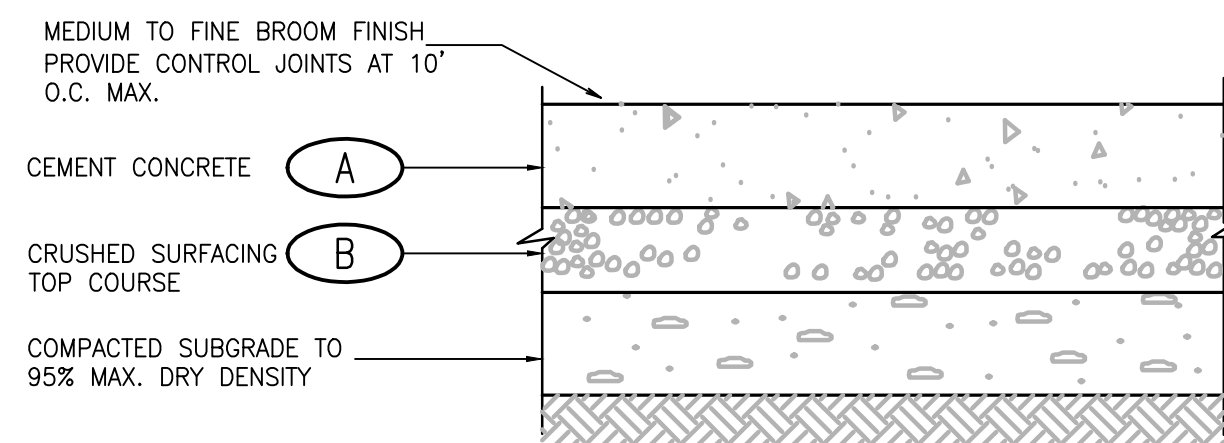
**LIGHT DUTY ASPHALT PAVEMENT SECTION**

NOT TO SCALE PER GEOTECHNICAL RECOMMENDATIONS



**HEAVY DUTY ASPHALT PAVEMENT SECTION**

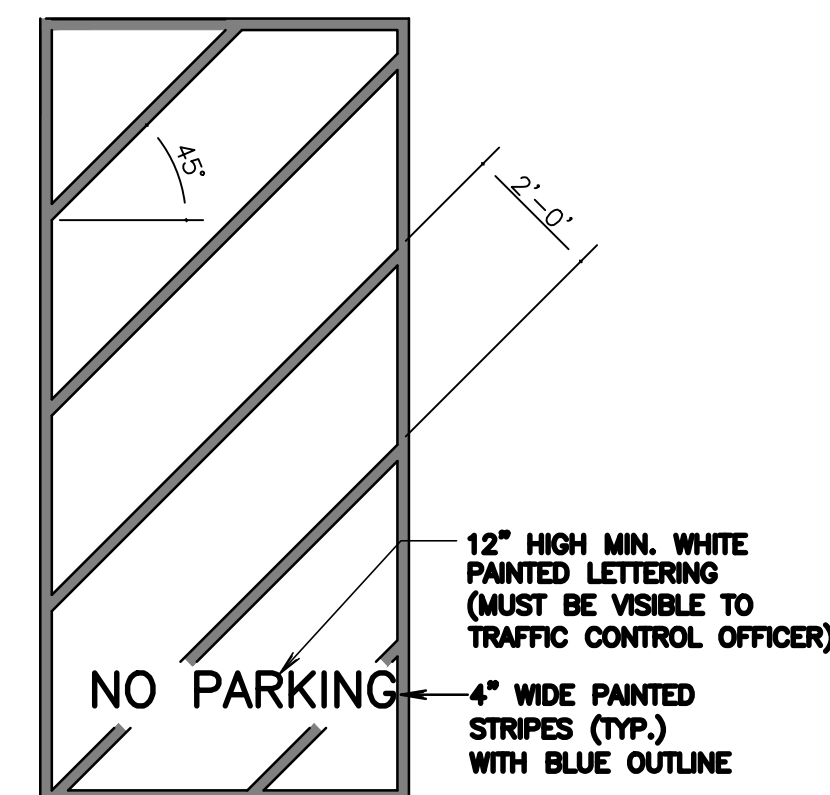
NOT TO SCALE PER GEOTECHNICAL RECOMMENDATIONS



SLAB LOCATION	(A)	(B)
SIDEWALKS (NON-VEHICULAR)	4"	4" COMPACTED DEPTH
FLUSH CROSSWALKS IN DRIVE AISLE	6"	6" COMPACTED DEPTH

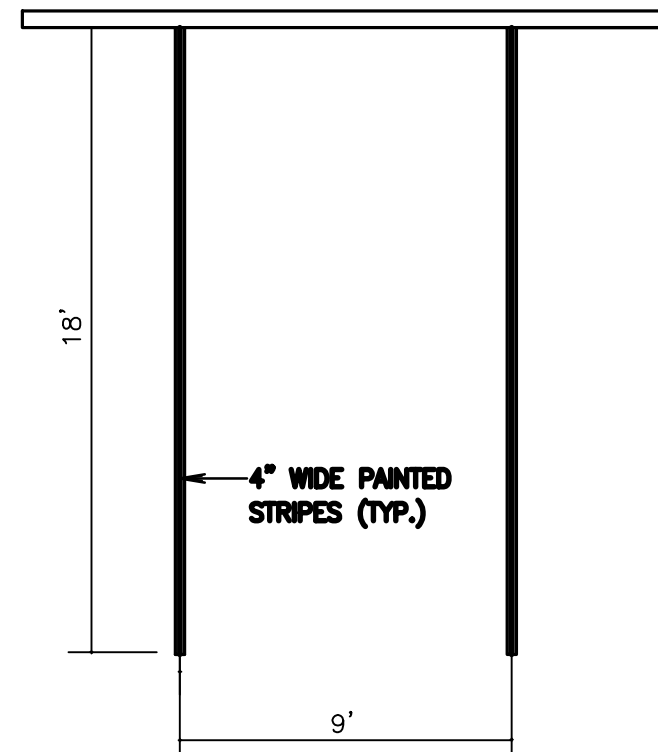
**EXTERIOR CONCRETE SLAB DETAIL**

NOT TO SCALE



**NOTE:**  
1. TYPE B - E-FORMED FUSED THERMOPLASTIC AT 120 MIL THICKNESS.  
**PAVEMENT MARKINGS**

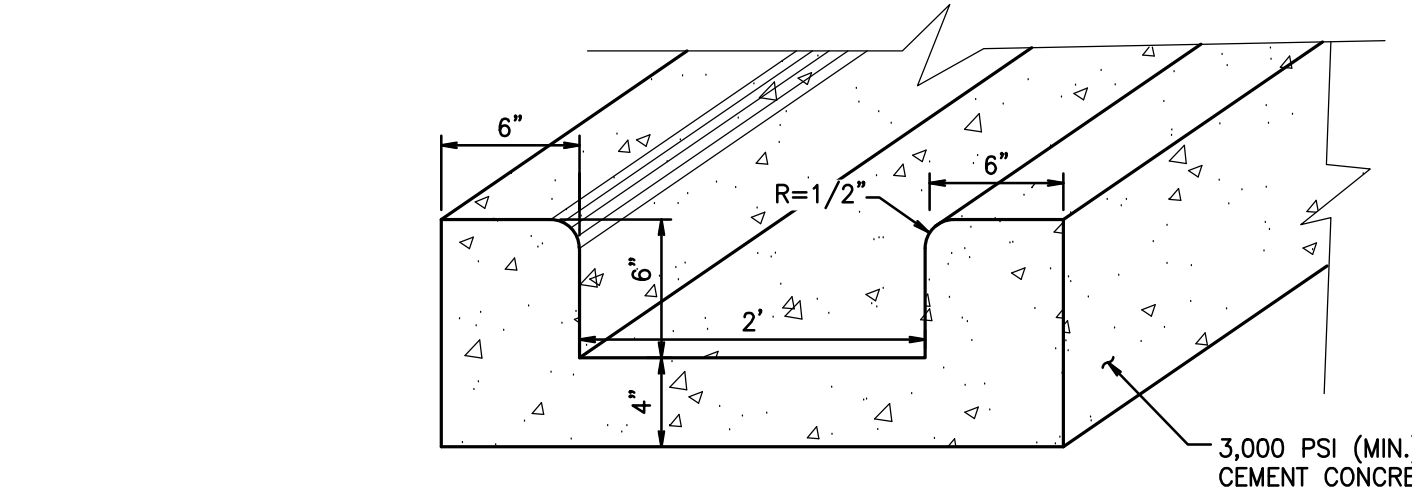
NOT TO SCALE



**NOTE:**  
1. 2 COATS ALKYD TRAFFIC PAINT MARKING PAINT.  
2. COLOR: WHITE FOR PARKING STRIPES.  
3. TYPE B - E-FORMED FUSED THERMOPLASTIC AT 120 MIL THICKNESS.  
**PARKING STALL PAVEMENT MARKINGS**

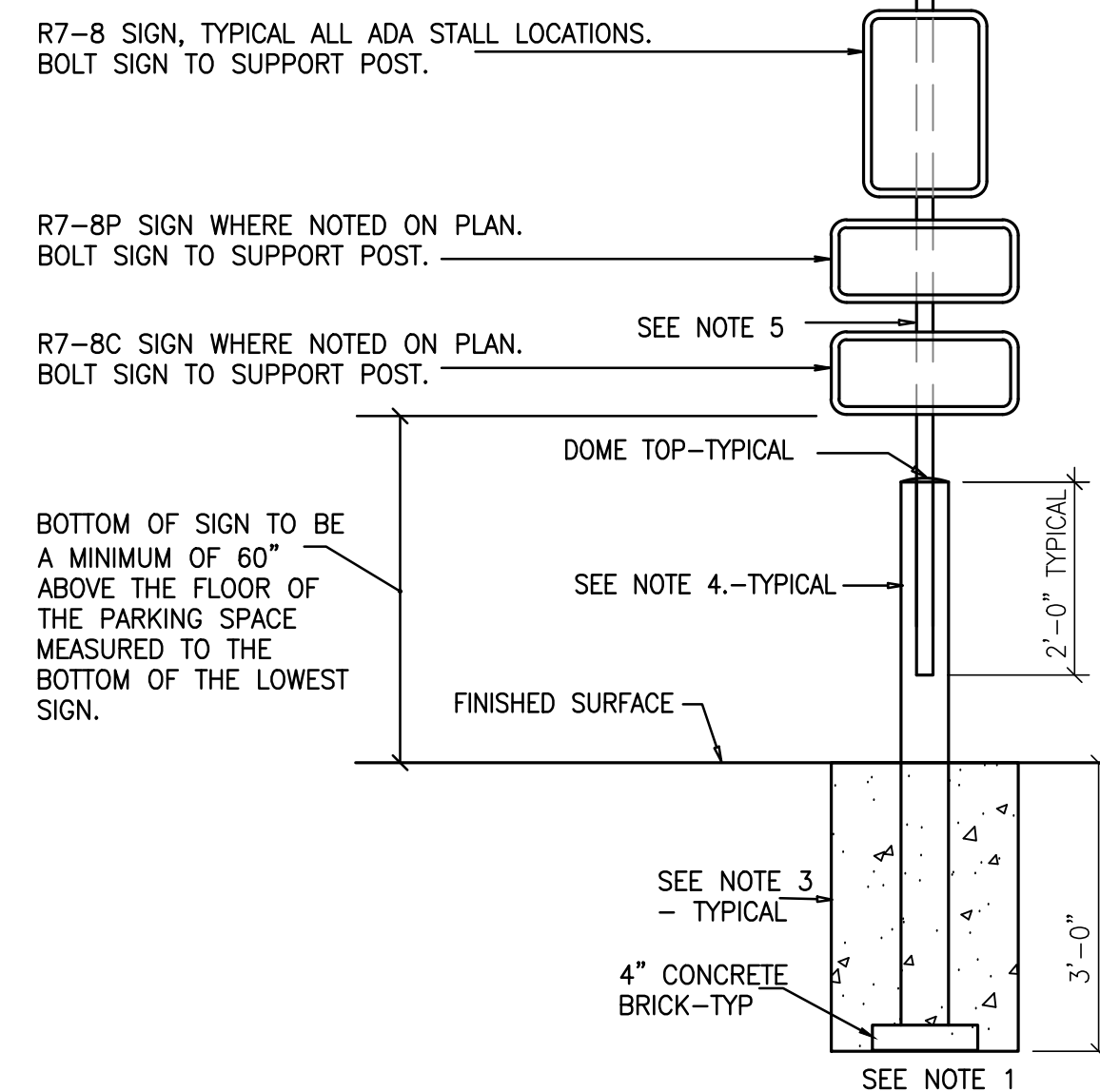
**PARKING STALL PAVEMENT MARKINGS**

NOT TO SCALE



**CONCRETE FLUME DETAIL**

NOT TO SCALE

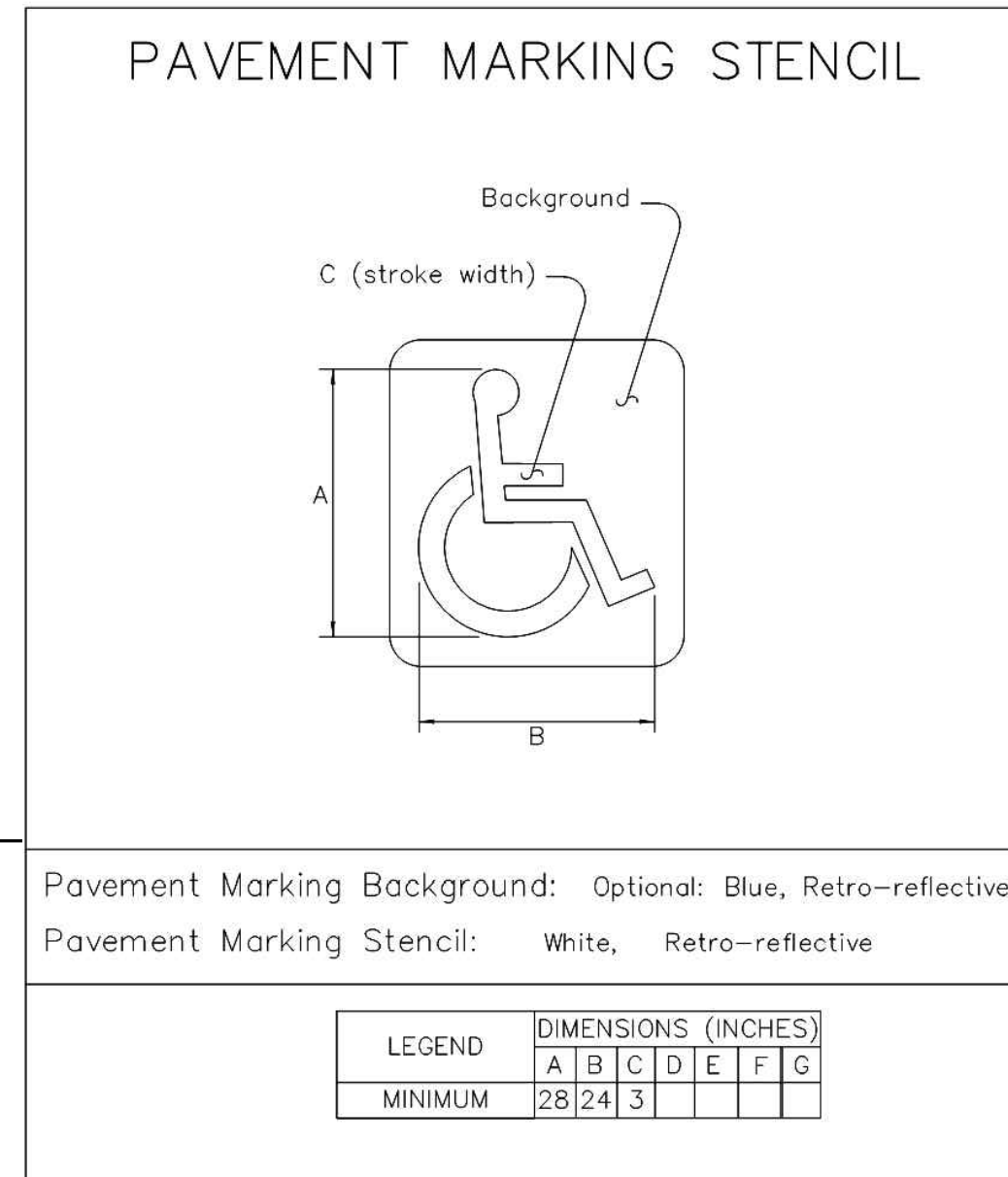


**ACCESSIBLE PARKING SIGN/POST**

N.T.S.

NOTES:

- INSTALL ALL SIGNS WHERE INDICATED ON SITE PLAN.
- ADJUST MOUNTING HEIGHTS TO MEET LOCAL CODES WHERE APPLICABLE.
- SET ALL POSTS IN 16" DIAMETER x 36" DEEP CONCRETE FOUNDATION.
- 4" x 6"-0" CONCRETE FILLED STEEL POST CENTERED IN FOUNDATION, PAINTED YELLOW, SEE SPECS.
- 2 1/4" WIDE x 6"-0" LONG U-CHANNEL POST WITH BAKED ON GREEN ENAMEL FINISH.



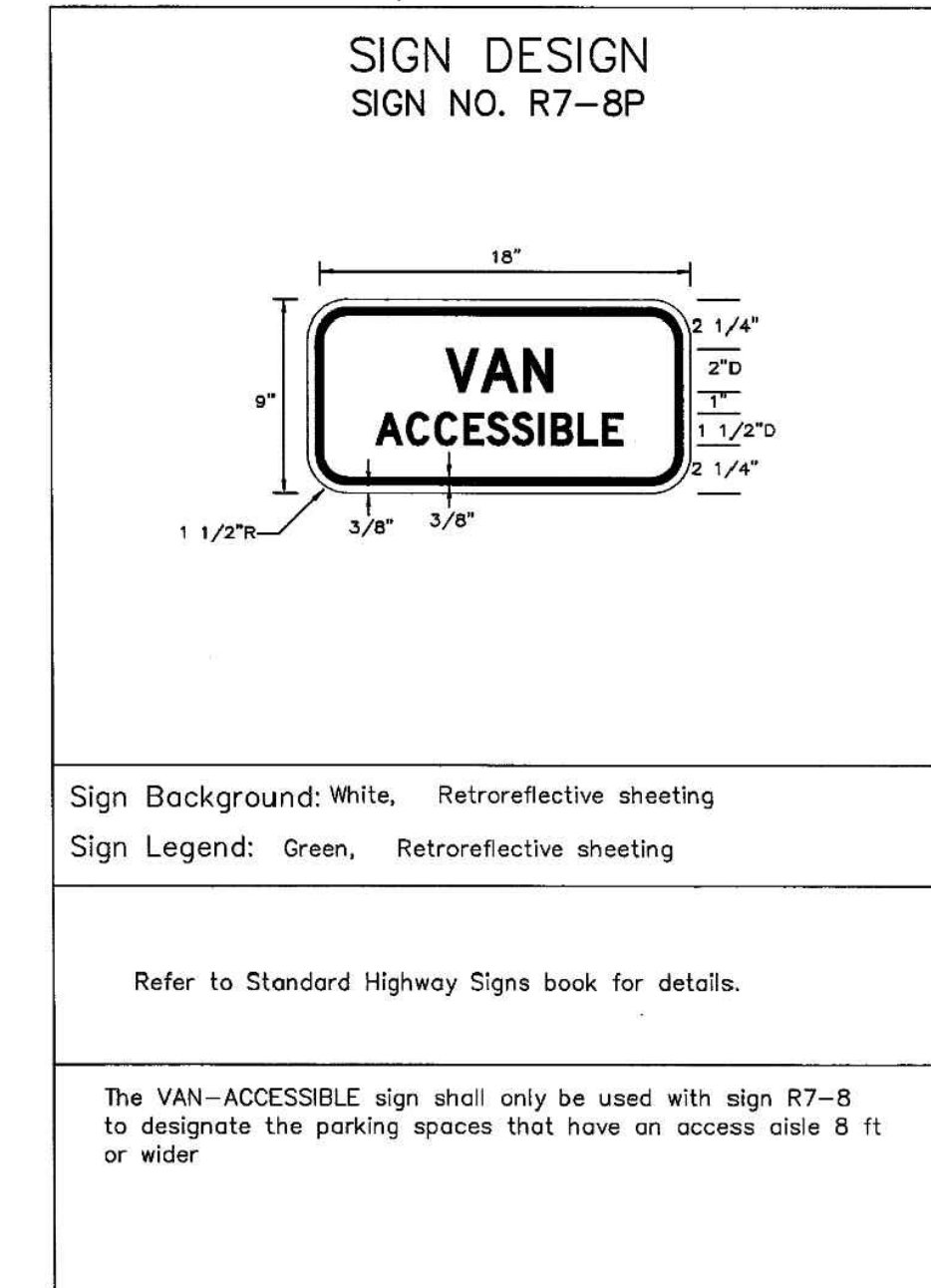
**PAVEMENT MARKING STENCIL**

Pavement Marking Background: Optional: Blue, Retro-reflective  
Pavement Marking Stencil: White, Retro-reflective

LEGEND	DIMENSIONS (INCHES)
A	28
B	24
C	3
D	3
E	3
F	3
G	3
MINIMUM	28 24 3 3 3 3 3

**PAVEMENT SYMBOL**

N.T.S.



**SIGN DESIGN  
SIGN NO. R7-8P**

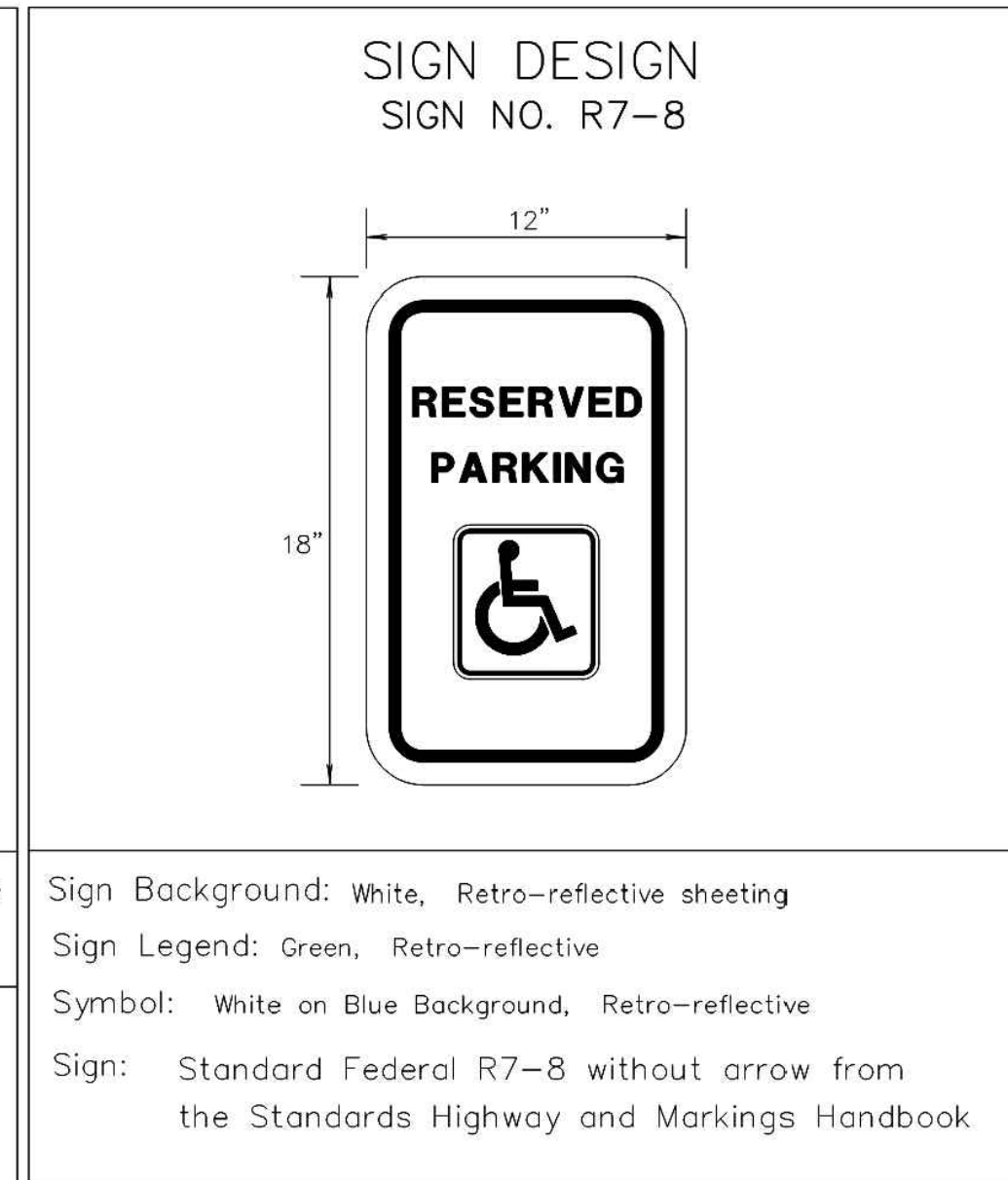
Sign Background: White, Retroreflective sheeting  
Sign Legend: Green, Retroreflective sheeting

Refer to Standard Highway Signs book for details.

The VAN-ACCESSIBLE sign shall only be used with sign R7-8 to designate the parking spaces that have an access aisle 8 ft or wider

**SIGN DETAIL**

N.T.S.



**SIGN DESIGN  
SIGN NO. R7-8**

Sign Background: White, Retro-reflective sheeting  
Sign Legend: Green, Retro-reflective  
Symbol: White on Blue Background, Retro-reflective  
Sign: Standard Federal R7-8 without arrow from the Standards Highway and Markings Handbook

**SIGN DETAIL**

N.T.S.

5

**ACCESSIBLE PARKING DETAILS**

NOT TO SCALE

APPROVED

BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

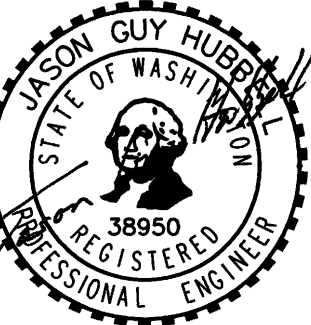
DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

DL 03/05/24 JSG RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
DL 02/27/24 JSG BID SET  
DL 12/06/23 JSG RESPONSE TO CITY COMMENTS, DATED 10-06-2023  
No. 1 Date By Ckd. Appr. Revision

**CONSTRUCTION DETAILS**  
**FORTRESS - PUYALLUP**

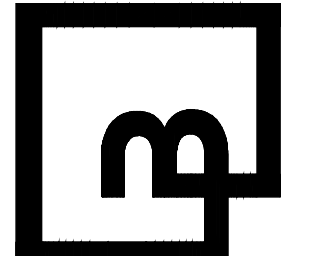
**FOR: CREF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Scale: Horizontal NA Vertical N/A

Designed: DL Drawn: ROC Checked: DL Approved: JGH Date: 6/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)



Job Number: **22085**  
Sheet: **C24** of **34**



# CONSTRUCTION DETAILS

**NOTES:**

- CONTRACTION JOINTS SHALL BE 3/8" x 2 1/4" ASPHALT SATURATED FELT PLACED IN ALL EXPOSED SURFACES OF CURB AND GUTTER AND SPACED AT 15' MAX. 10' MIN. O.C.
- THRU JOINTS SHALL BE 3/8" ASPHALT SATURATED FELT PLACED AT POINTS OF TANGENCY ON CURVES, AT CATCH BASINS, AND AT EDGES OF ALLEY AND DRIVEWAYS. THE MAXIMUM DISTANCE BETWEEN THRU JOINTS SHALL BE 100'.
- CONCRETE SHALL BE CLASS 3000 COMMERCIAL CONCRETE, 5.5 SACK MINIMUM, ASHTO GRADING 467 COARSE AGGREGATE, NO FLY ASH.
- FORMS SHALL BE STEEL UNLESS PRIOR APPROVAL IS GIVEN BY THE CITY ENGINEER. FORMS SHALL BE SET TRUE TO LINE AND GRADE AND SECURELY STAKED PRIOR TO CONCRETE PLACEMENT. FULL DEPTH DIVISION PLATES ARE ONLY TO BE USED WHERE THRU JOINTS ARE TO BE PLACED.
- THE 1" RADIUS ON THE UPPER FACE OF THE CURB MAY BE FORMED BY AN EDGER TOOL OR BUILT INTO THE FACE FORM. THE 1" RADIUS AT THE BOTTOM FACE OF THE CURB SHALL BE FORMED BY THE FACE FORM.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS  
DATE: 01.02.09

**NOTES:**

- TRENCHING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(1)A AND 2-06.3(1) OF THE WSDOT SPECIFICATIONS.
- BEDDING MATERIAL SHALL CONFORM TO 9-03.12(3) GRAVEL BACKFILL FOR PIPE BEDDING.
- GRAVEL BACKFILL SHALL CONFORM TO 9-03.12(1)A GRAVEL BACKFILL FOR FOUNDATIONS, CLASS A.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER  
DATE: 06.01.01

**NOTES:**

- MANHOLE STEPS AND HANDHOLDS SHALL BE POLYPROPYLENE COATED GRADE 60 REBAR CONFORMING TO ASTM C-478, D-4101, A-615 AND AASHTO M-199.
- PREFABRICATED LADDERS SHALL BE MADE OF REBAR AND ENCASED IN POLYPROPYLENE AFTER FABRICATION.
- STEPS MAY BE INSTALLED: CAST IN PLACE OR DRIVEN INTO PREFORMED HOLES WITH THE CONCRETE CURED TO 3,000 PSI MINIMUM, OR BY DRILLING TWO ONE INCH DIAMETER HOLES, 3-3/4" DEEP, 13" O.C. APPLY NON-SHRINK GROUT AROUND BARBED ENDS AND DRIVE TO FULL INSERTION.
- PENETRATION OF THE OUTER WALL OF A STRUCTURE WITH A LEG OF A STEP OR LADDER SHALL NOT OCCUR. STEPS AND LADDER RUNGS SHALL BE SPACED AT 12 INCHES AND SHALL BE VERTICALLY ALIGNED.
- STEPS, HANDHOLDS, LADDER RUNGS AND FASTENINGS SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 300 LBS AND A PULL OUT FORCE OF 1,000 LBS.
- STEPS, HANDHOLDS, AND LADDER PARTS SHALL BE FREE OF SPLINTERS, SHARP EDGES, BURRS OR PROJECTIONS WHICH MAY CAUSE HAZARDS.
- REQUESTS TO USE STEPS, HANDHOLDS AND LADDERS MADE FROM NON-CORROSIVE MATERIALS SUCH AS STAINLESS STEEL AND PLASTIC MAY BE ACCEPTED AFTER REVIEW AND APPROVAL BY THE CITY. GALVANIZED STEEL WILL NOT BE PERMITTED IN SANITARY SEWER AND STORM SEWER MANHOLES AND STRUCTURES.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER  
DATE: 06.01.03

**PREFABRICATED POLY LADDER**  
VAULT LADDER SHALL BE A LANE POLY LADDER OR AN APPROVED EQUAL MEETING THE REQUIREMENTS OF ASTM C-478, A-615, D4101 AND AASHTO M-199

**MANHOLE LADDER**  
DATE: 06.01.04

NOTE: DRAWINGS DEPICT BLOCK LOCATION, NOT SIZE. FOR SIZE SEE NOTES 3, 4, 5, AND CITY STD. 03.02.01-3

**NOTES:**

- THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING THRUST BLOCKS:
  - BLOCKS MUST BE POURED OR PLACED AGAINST UNDISTURBED SOIL.
  - THE PIPE FITTING(S) AND BOLTS MUST BE ACCESSIBLE. WRAP IN PLASTIC BEFORE POURING CONCRETE BLOCKING.
  - CONCRETE SHOULD BE CURED FOR AT LEAST 5 DAYS AND SHOULD HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.
  - RESTRAINED JOINTS SHALL BE INSTALLED, IN ADDITION TO CONCRETE THRUST BLOCKING.
  - BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.
- ALL PIPE SHALL BE PROPERLY BEDDED, SEE CITY OF PUYALLUP STANDARD BEDDING DETAIL NO. 06.01.01.
- CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
- OMICE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
- BEARING SURFACE AREAS TO BE ADJUSTED BY THE ENGINEER FOR OTHER PRESSURE AND/OR SOIL CONDITIONS.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER  
DATE: 03.02.01-1

**TABLE 2: THRUST AT FITTINGS AT 200 PSI**

SIZE	TEST PRESSURE (PSI)	THRUST FITTINGS AT 200 PSI				
		A	B	C	D	E
4"	200	3,140	4,440	2,405	1,225	615
6"	200	7,070	9,995	5,410	2,760	1,385
8"	200	12,565	17,770	9,620	4,905	2,485
10"	200	19,635	27,770	15,030	7,660	3,850
12"	200	28,275	39,985	21,640	11,030	5,545
14"	200	38,485	54,425	29,455	15,015	7,545
16"	200	50,265	71,085	38,470	19,615	9,855

**TABLE 3: BEARING VALUE OF SOIL**

SOIL TYPE	SAFE BEARING LOAD LBS/SF
MUCK, PEAT, ETC.	0
SOFT CLAY/ALLUVIAL SOIL	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

SEE CITY STANDARDS 03.02.01-1 AND 03.02.01-2 FOR ADDITIONAL INFORMATION.

**NOTES:**

- TO DETERMINE THRUST AT PRESSURES OTHER THAN PSI SHOWN, MULTIPLY THE THRUST OBTAINED IN TABLE 2 BY THE RATIO OF THE PRESSURE TO 200 PSI.  
EXAMPLE: THE THRUST ON A 12 INCH, 90° BEND AT 300 PSI.  
 $39,985 \times \frac{300}{200} = 59,978$  LBS
- TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (SF):  
SEE TABLE 3, BEARING VALUE OF SOIL.  
EXAMPLE: FOR SAND AND GRAVEL BEARING VALUE FROM TABLE 3 IS 3,000 LBS/SF  
 $59,978 \text{ LBS} \div 3,000 \text{ LBS/SF} = 20 \text{ SF}$  OF AREA
- CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE
- AREAS SHALL BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.
- NO WATER MAIN SHALL DEAD END AGAINST A MAIN LINE VALVE. DEAD END WATER MAINS SHALL BE BLOCKED AGAINST A RESTRAINED MECHANICAL JOINT (M.J.) PLUG OR CAP.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2016

**NOTES:**

- NEAT LINE CUTS SHALL BE SEALED AT TOP WITH A HOT PAVING GRADE AND FACE OF CUT TACKED.
- TOP OF SHELF, SLOPE 1/2" PER FOOT, CONSTRUCT IN FIELD CHANNEL AND SHELF TO THE CROWN OF THE PIPE.

**MANHOLE COVER SHALL BE MARKED WITH "SEWER" IN 2" RAISED LETTERS. SEE CITY STANDARD DETAILS NO. 06.01.02 & 06.01.03 FOR ADDITIONAL INFORMATION.**

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS  
DATE: 04.01.01

**EAST JORDAN IRON WORKS 24" "ERGO" FRAME & COVER (PRE-APPROVED PRODUCT)**

**OLYMPIC FOUNDRY MH41 RING & HINGE PUYALLUP COVER (PRE-APPROVED PRODUCT)**

**NOTES:**

- EAST JORDAN IRON WORKS 24" "ERGO" and OLYMPIC FOUNDRY MH41 RING & HINGE PUYALLUP COVER ARE PRE-APPROVED PRODUCTS AND SHALL BE USED FOR PUBLICLY-OWNED INFRASTRUCTURE. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.
- MANHOLE FRAME AND COVERS SHOULD NOT BE LOCATED IN PEDESTRIAN PATHWAYS (E.G. SIDEWALKS, CROSSWALKS, ETC.), WHERE EXISTING OR PROPOSED CONDITIONS REQUIRE A MANHOLE FRAME AND COVER TO BE INSTALLED WITHIN A PEDESTRIAN PATHWAY, THE MANHOLE FRAME AND COVER SHALL BE ADA COMPLIANT.
- NON-ROCKING FIT FOR MANHOLE COVERS.
- CASTING TO BE SHOT BLASTED AND FREE FROM SURFACE SAND AND SCALE.
- CASTING TO BE SMOOTH, TRUE TO PATTERN, FREE FROM BLOWHOLES, POROSITY HARD SPOTS, SHRINK HOLES, WARP, OR ANY OTHER DEFECTS WHICH WOULD IMPAIR SERVICEABILITY.
- CASTINGS SHALL BE UNCOATED.
- FOR STORM APPLICATIONS CAST LETTERS SHALL READ "STORM".
- INSTALL FRAME AND COVER IN ROADWAY WITH HINGED SIDE OF ASSEMBLY POINTED TOWARD ONCOMING TRAFFIC.
- THE CITY SHALL HAVE THE RIGHT TO REQUIRE INSPECTION AND APPROVAL OF ALL CASTINGS PRIOR TO PAINTING.
- REPAIR OR DEFECTS BY WELDING, OR BY THE USE OF "SMOOTH-ON" OR SIMILAR MATERIAL WILL NOT BE PERMITTED.
- MANHOLE RING AND COVER SHALL BE FREE OF POROSITY, SHRINK CAVITIES, COLD SHUTS OR CRACKS OR ANY SURFACE DEFECTS WHICH WOULD IMPAIR SERVICEABILITY.
- FRAME HEIGHT MAY BE 4" FOR OVERLAYS AND PAVEMENT REHABILITATION PROJECTS, WITH WRITTEN APPROVAL BY THE CITY ENGINEER.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER  
DATE: 2/15/2016

**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

**CONSTRUCTION DETAILS**

**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**FOR:** JASON GUY HUBERT  
STATE OF WASHINGTON  
REGISTERED PROFESSIONAL ENGINEER  
38850  
3/05/2024

Scale: Horizontal NA Vertical N/A

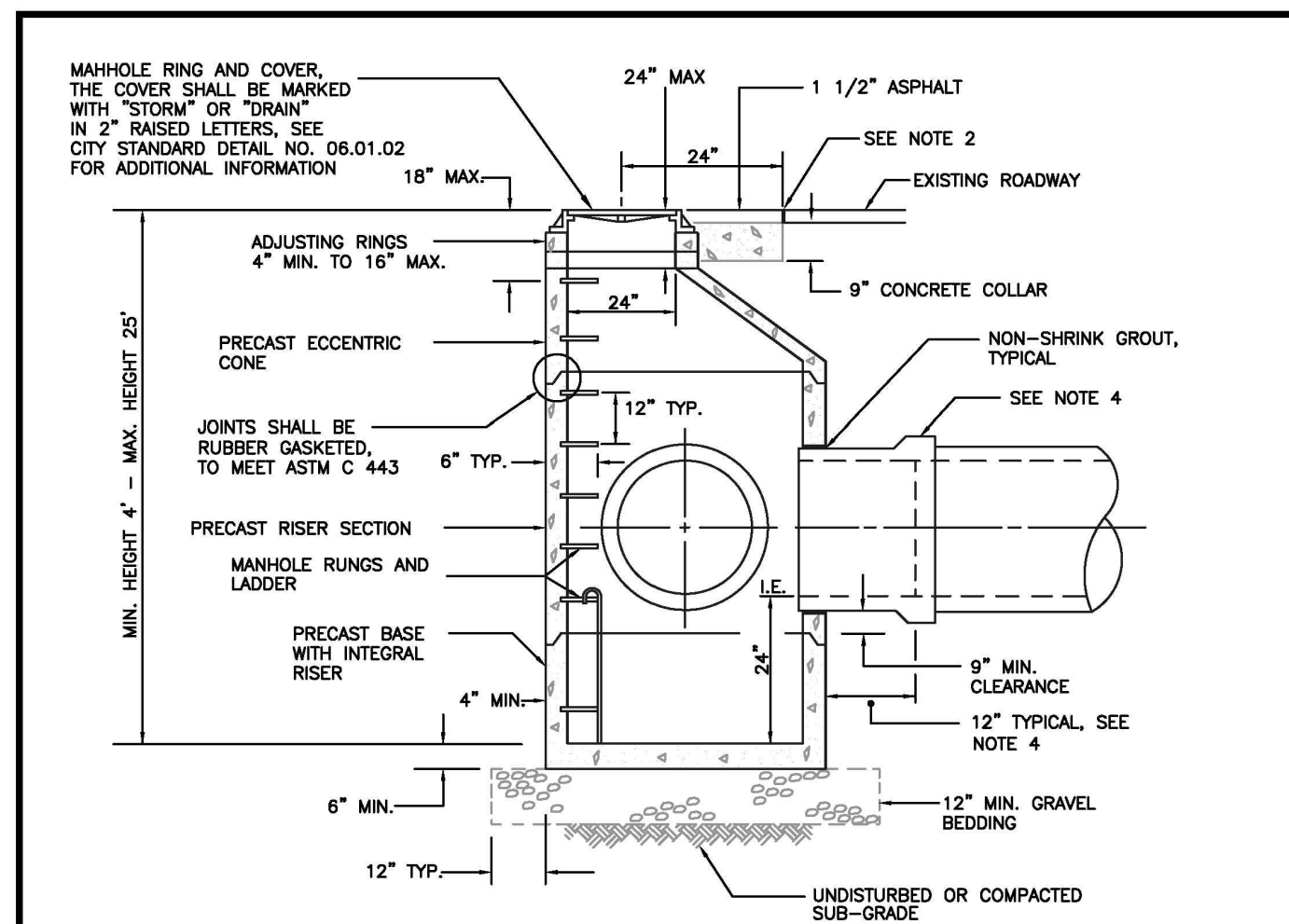
Designed: DL Drawn: ROC Checked: JGH Approved: JGH Date: 6/23/23

**Barghausen Consulting Engineers, Inc.**  
1825 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

Job Number: 22085 Sheet: C25 of 34

Revision:  
2 03/05/24 DL JSG RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
02/27/24 DL JSG BID SET  
1 12/06/23 DL JSG RESPONSE TO CITY COMMENTS, DATED 10-06-2023

# CONSTRUCTION DETAILS

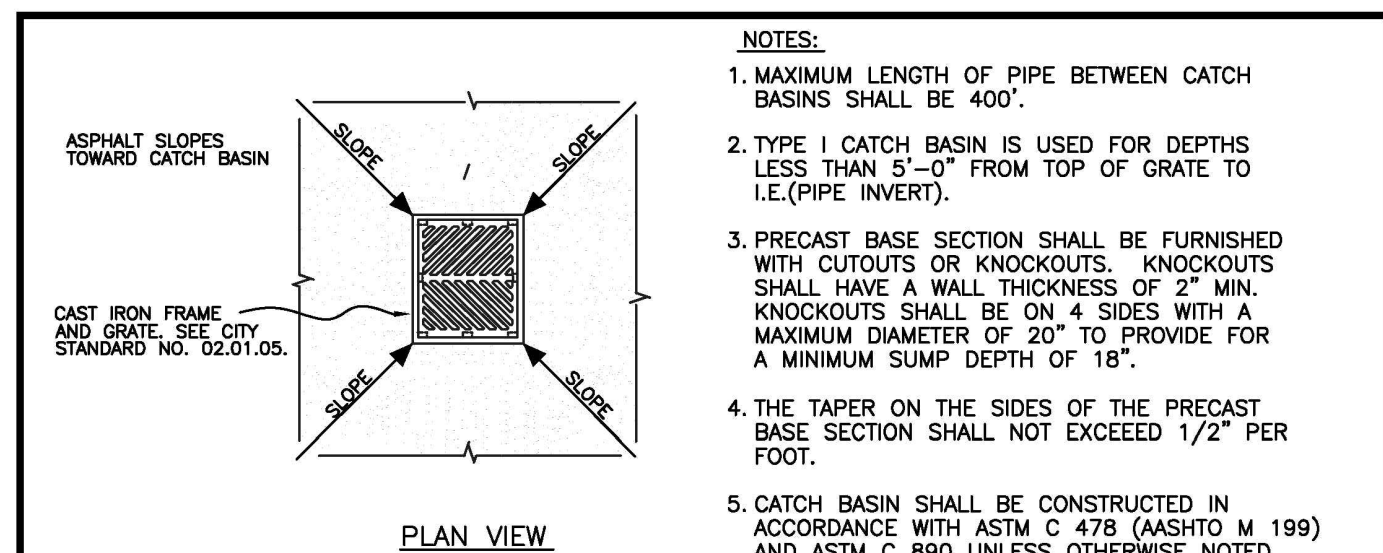


- NOTES:**
1. THE CONSTRUCTION AND INSTALLATION OF STORM SEWER MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF WSDOT SPEC. SECTION 7-05 AND ASTM C 478.
  2. THE FACE OF NEAT LINE CUTS IN EXISTING ASPHALT PAVEMENT SHALL BE TACK COATED AND THE TOP OF THE JOINT SHALL BE SEALED WITH A HOT PAVING GRADE ASPHALT.
  3. PRECAST RISER SECTION OR PRECAST BASE WITH INTEGRAL RISER SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS WITH A MINIMUM WALL THICKNESS OF 2\"/>

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**STORM SEWER MANHOLE**

DESIGNED BY: JIM PERRY-BYRONDA  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 08/01/2018  
SCALE: 1/8\"/>

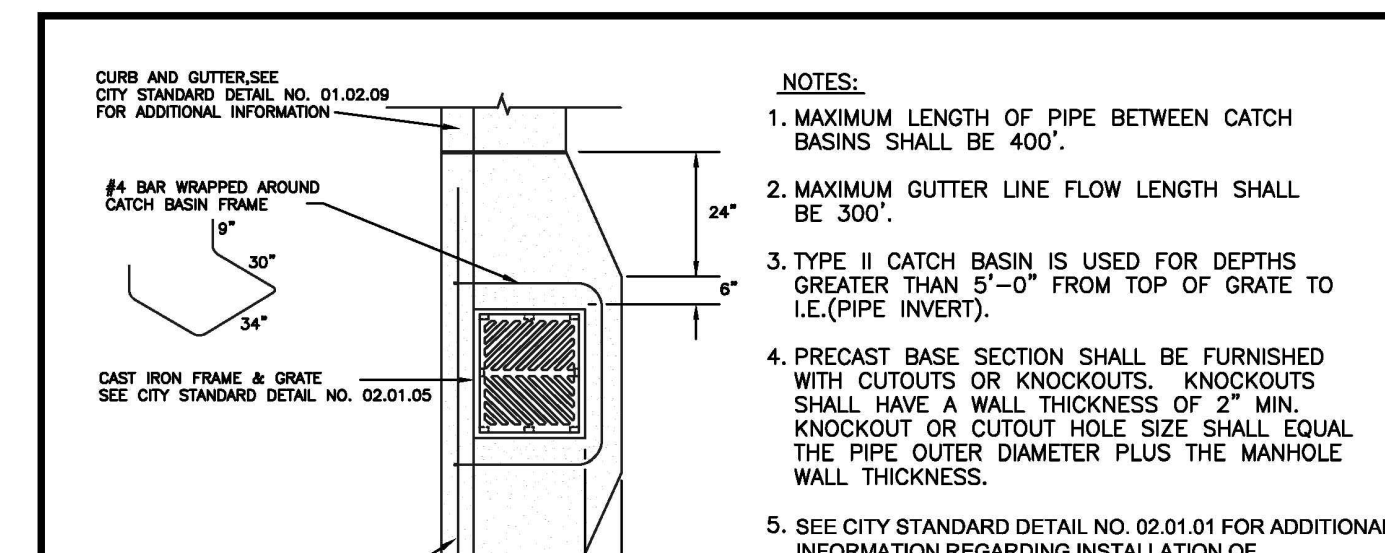


- NOTES:**
1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASIN SHALL BE 400'.
  2. TYPE I CATCH BASIN IS USED FOR DEPTHS LESS THAN 5'-0\"/>

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**CATCH BASIN TYPE I (AREA DRAIN)**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 08/01/2018  
SCALE: 1/8\"/>

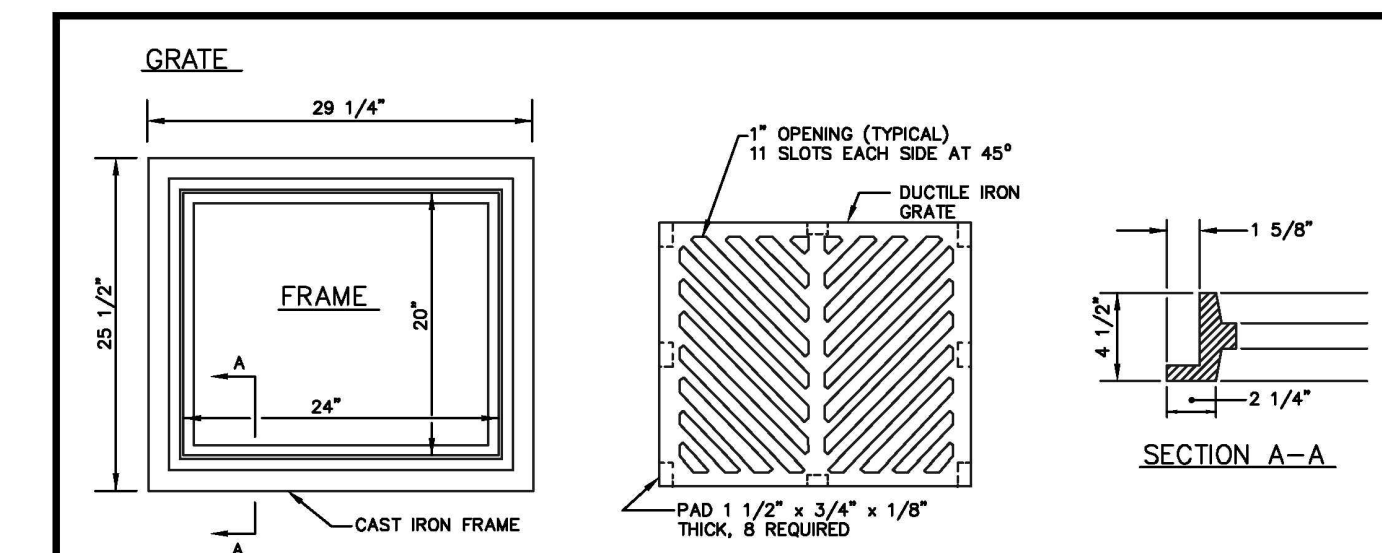


- NOTES:**
1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
  2. MAXIMUM GUTTER LINE FLOW LENGTH SHALL BE 300'.
  3. TYPE II CATCH BASIN IS USED FOR DEPTHS GREATER THAN 5'-0\"/>

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**CATCH BASIN TYPE II**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 08/01/2018  
SCALE: 1/8\"/>

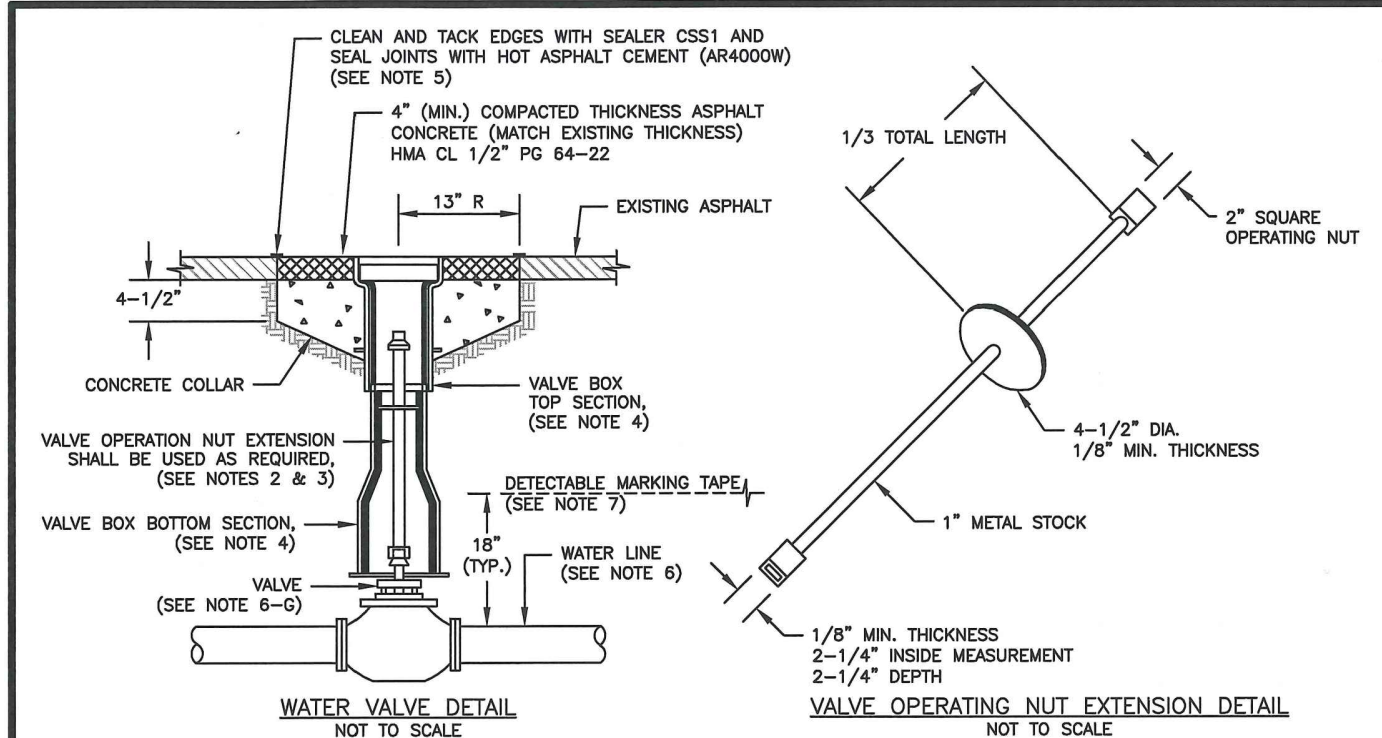


- NOTES:**
1. MATERIAL SHALL CONFORM TO SECTION 9-05.15 "METAL CASTINGS" OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PUBLISHED BY THE STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
  2. THE NAME OF THE MANUFACTURE AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16\"/>

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**CATCH BASIN FRAME AND GRATE/VANED GRATE**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 08/01/2018  
SCALE: 1/8\"/>

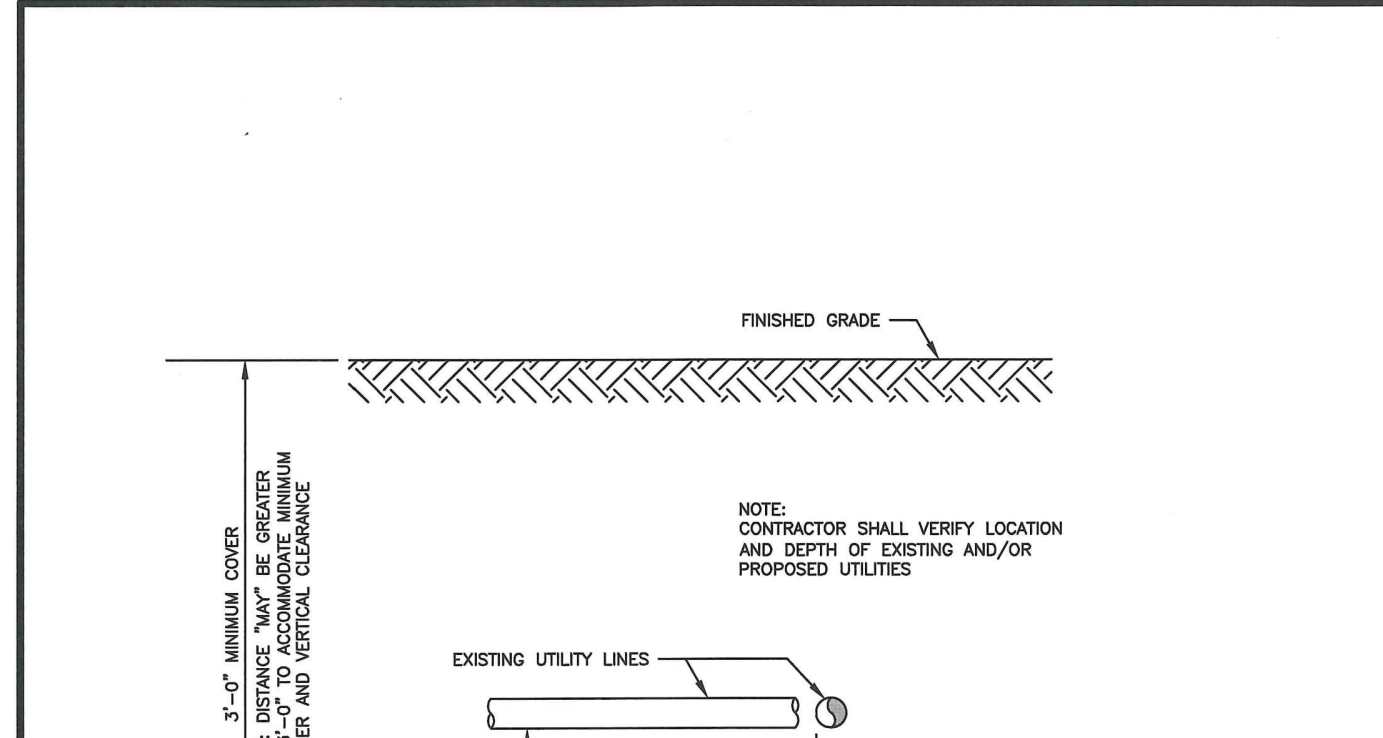


- NOTES:**
1. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36\"/>

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER

**WATER VALVE AND MAINS**

DESIGNED BY: JIM PERRY-BYRONDA  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 03/15/2018  
SCALE: (NOT TO SCALE)  
CITY STANDARD: 03.01.01



- NOTES FOR WATER MAIN CROSSING OTHER UTILITIES**
- WHEN LOCAL CONDITIONS PREVENT THE SEPARATIONS DESCRIBED ON CITY STANDARD 03.01.03-1, A SEWER MAY BE LAID CLOSER THAN 10- FEET HORIZONTALLY OR 18-INCHES VERTICALLY TO A WATER LINE, PROVIDED THE GUIDELINES BELOW ARE FOLLOWED:
- UNUSUAL CONDITIONS (PARALLEL SYSTEMS)**
1. SEWER LINE IS LAID IN A SEPARATE TRENCH FROM THE WATER LINE.
  2. WHEN 18-INCHES VERTICAL SEPARATION CANNOT BE OBTAINED, THE SEWER SHALL BE CONSTRUCTED OF MATERIALS AND JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND SHALL BE PRESSURE TESTED TO ENSURE WATER TIGHTNESS PRIOR TO BACKFILLING.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER

**WATER MAIN CROSSING OTHER UTILITIES**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 03/15/2018  
SCALE: (NOT TO SCALE)  
CITY STANDARD: 03.01.03-1

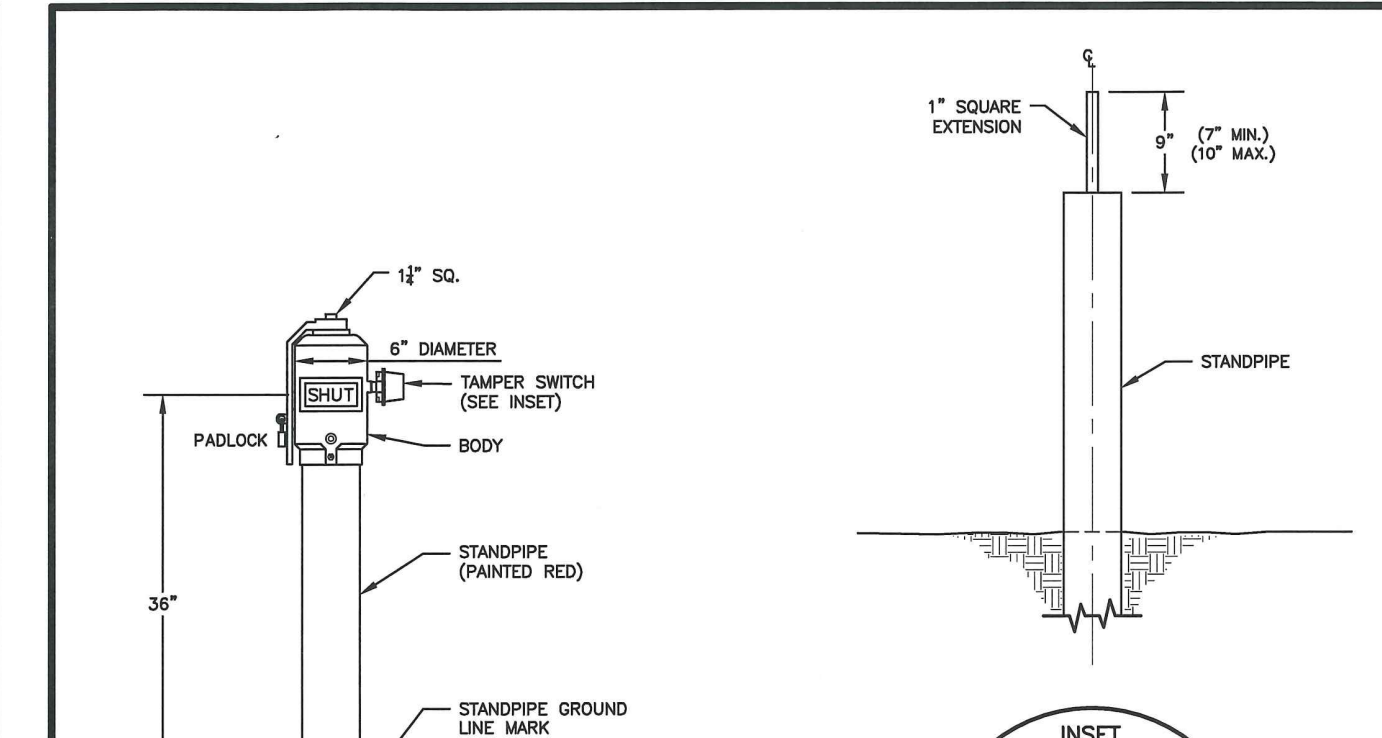
- UNUSUAL CONDITIONS (PERPENDICULAR SYSTEMS)**
- CONDITION A - GRAVITY SEWERS PASSING UNDER WATER LINES (ALL OF THE FOLLOWING APPLY)
1. ONE FULL SEGMENT (NOT LESS THAN 10- FEET LONG) OF DUCTILE IRON CLASS 52 WATER PIPE, AND THE LONGEST STANDARD SEWER PIPE LENGTH AVAILABLE FROM THE MANUFACTURER SHALL BE USED WITH THE CENTERED TO MAXIMIZE JOINT SEPARATION.
  2. STANDARD GRAVITY-SEWER MATERIAL ENCASED IN CONCRETE OR IN A ONE- QUARTER- INCH THICK CONTINUOUS STEEL, DUCTILE IRON, OR PRESSURE RATED PVC PIPE WITH A DIMENSION RATIO (THE RATIO OF THE OUTSIDE DIAMETER TO THE PIPE WALL THICKNESS) OF 18 OR LESS, WITH ALL Voids PRESSURE- GROUTED WITH SAND- CEMENT GROUT OR BENTONITE.

- CONDITION B - GRAVITY SEWER PASSING OVER WATER LINES
- WATER LINES SHALL BE PROTECTED BY PROVIDING:
1. A VERTICAL SEPARATION OF AT LEAST 18-INCHES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATER LINE.
  2. ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER LINE TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING OF THE WATER LINE.
  3. THE SEWER PIPE SHALL BE THE LONGEST STANDARD SEWER PIPE LENGTH AVAILABLE FROM THE MANUFACTURER WITH THE WATER AND SEWER PIPES CENTERED TO MAXIMIZE JOINT SEPARATION.
  4. THE SEWER LINE CASING EQUIVALENT TO THAT SPECIFIED IN A(2) ABOVE.

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER

**WATER MAIN CROSSING OTHER UTILITIES (NOTES)**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 03/15/2018  
SCALE: (NOT TO SCALE)  
CITY STANDARD: 03.01.03-2



- FIELD ADJUSTMENT INSTRUCTIONS**
1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
  2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
  3. CUT THE 1\"/>

**CITY OF PUYALLUP**  
OFFICE OF THE CITY ENGINEER

**POST INDICATOR VALVE**

DESIGNED BY: LINDA LIAN  
CHECKED BY: LINDA LIAN  
APPROVED BY: COLLEEN HARRIS  
DATE APPROVED: 03/15/2018  
SCALE: (NOT TO SCALE)  
CITY STANDARD: 03.10.03

**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

**CONSTRUCTION DETAILS**

**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**FOR:**

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

**22085**  
Job Number

**34**  
Sheet

**C26**  
of

Revision:  
2 03/05/24 DL JSG RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
02/27/24 DL JSG BID SET  
1 12/06/23 DL JSG RESPONSE TO CITY COMMENTS, DATED 10-06-2023

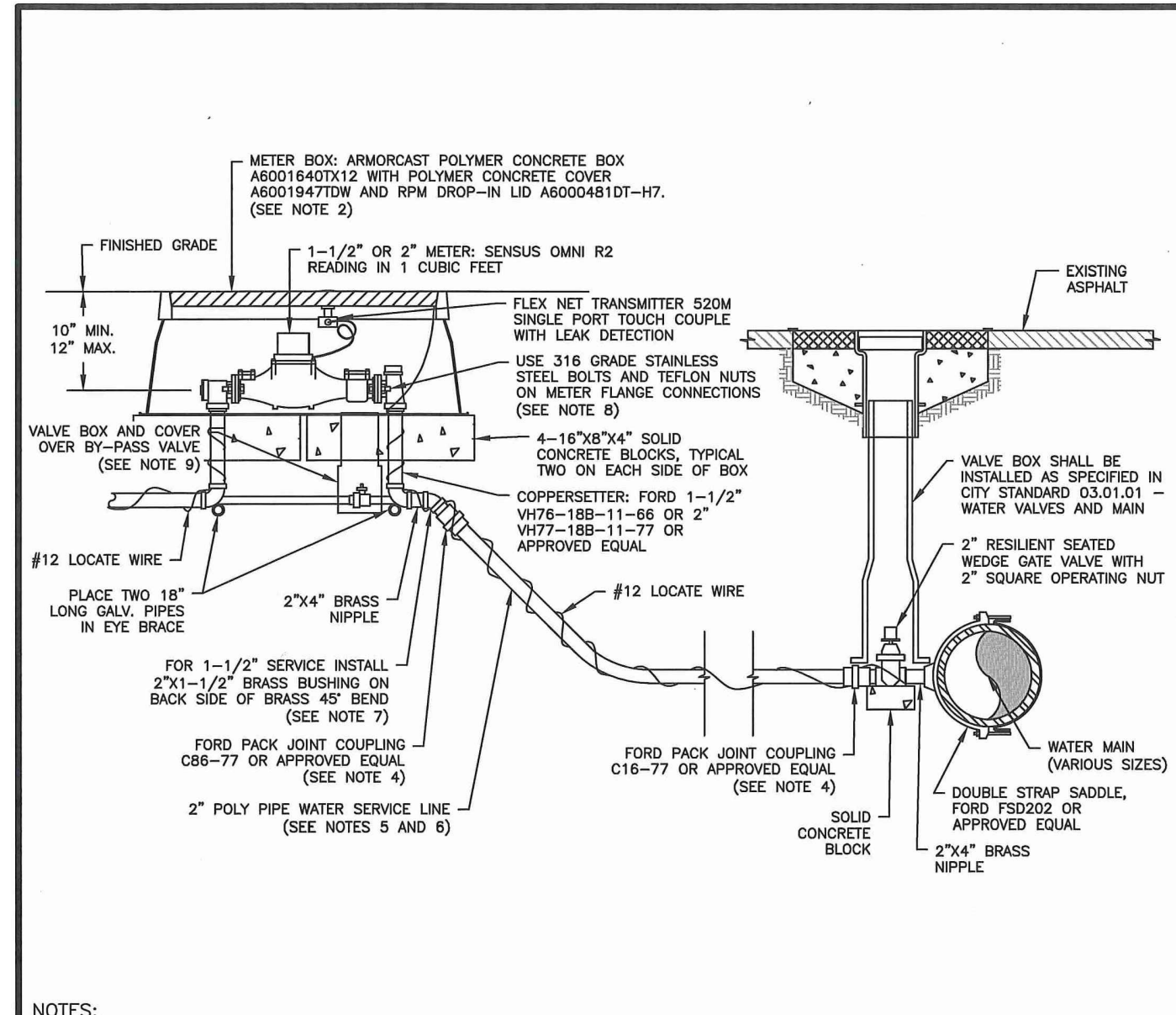
Scale:  
Horizontal NA  
Vertical N/A

Designed: DL  
Drawn: ROC  
Checked: DL  
Approved: JGH  
Date: 8/23/23

3/05/2024  
JASON GUY HUBBARD  
STATE OF WASHINGTON  
3880  
REGISTERED PROFESSIONAL ENGINEER

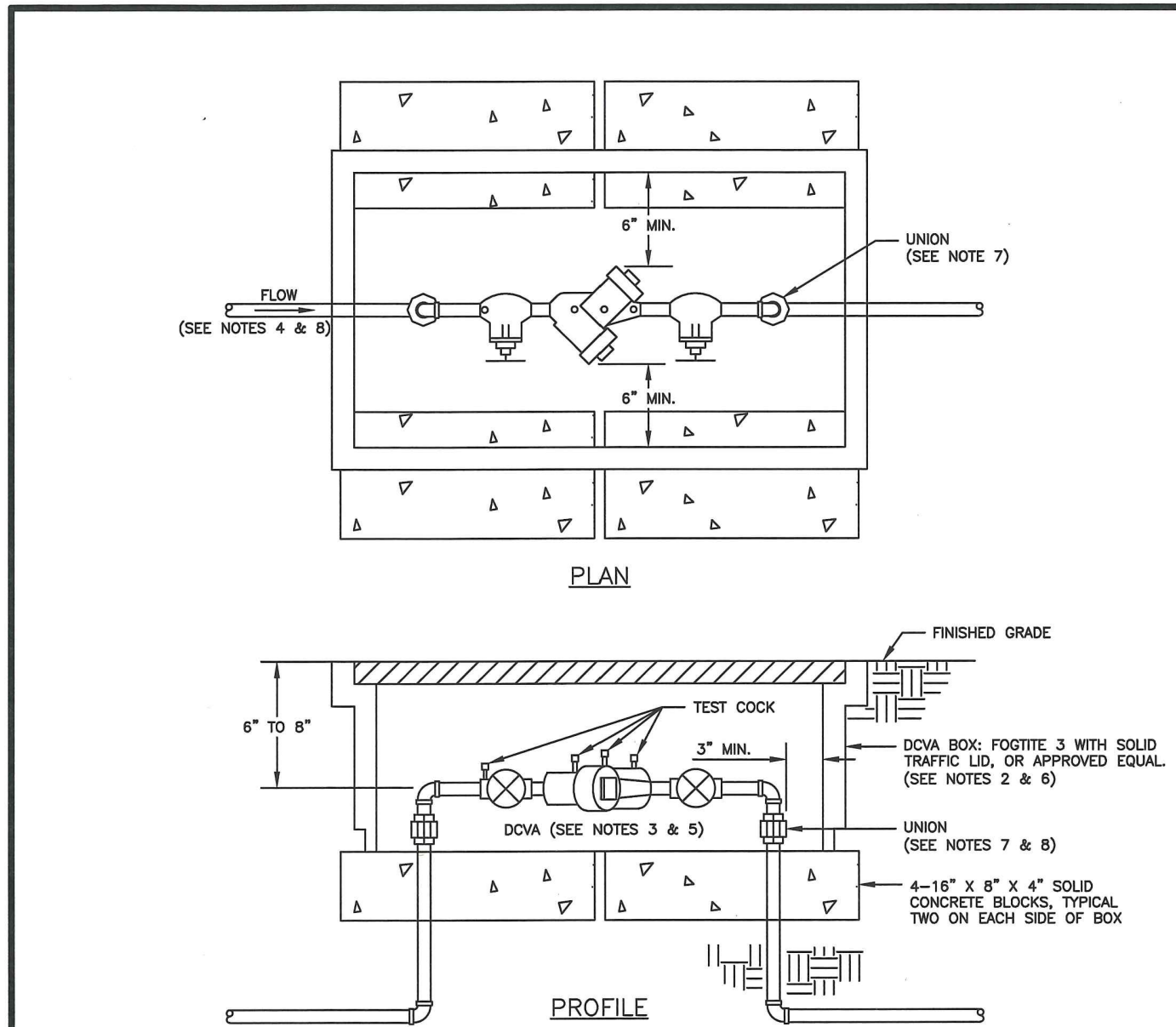
APPROVED

# CONSTRUCTION DETAILS



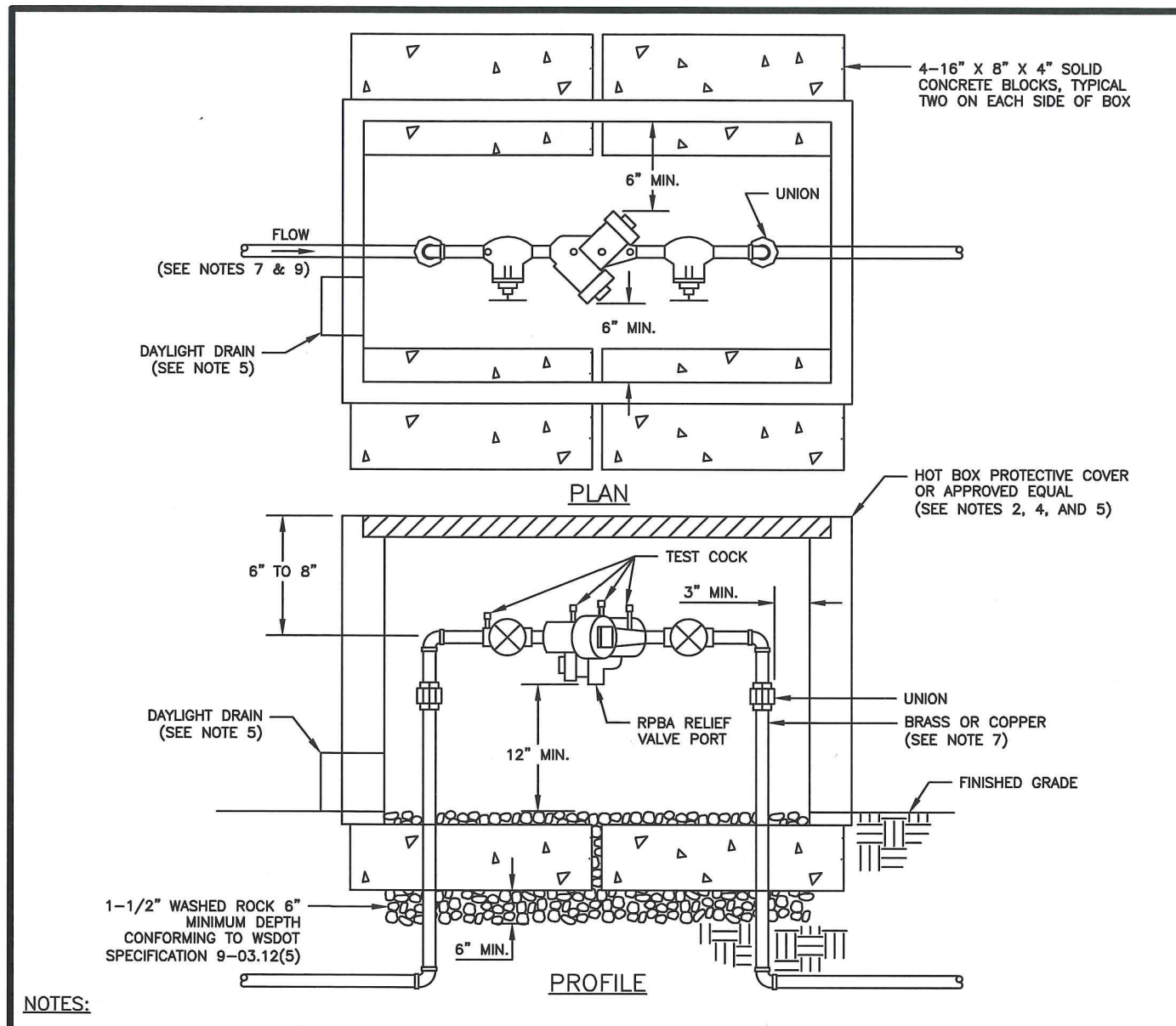
- NOTES:**
- ALL MATERIALS AND FITTINGS SHALL BE AS SPECIFIED OR AN APPROVED EQUAL.
  - NORMALLY THE WATER METER BOX SHOULD BE LOCATED IN THE PLANTING STRIP. IF SIDEWALK IS AGAINST THE CURB, PLACE METER BOX DIRECTLY BEHIND THE SIDEWALK. THE WATER METER BOX SHALL NOT BE LOCATED IN HARD SURFACES. WHEN UNAVOIDABLE, EXCEPTIONS CAN BE MADE AT END OF CURB-OR-SACS OR PAVEMENT LOTS.
  - WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM OF 48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.
  - ALL POLY PIPE COUPLINGS SHALL USE PIPE INSERT STIFFENERS.
  - THE WATER SERVICE LINE SHALL BE BEDDED IN WASHED SAND WITH 36" OF COVER BELOW FINISHED GRADE WITHIN THE RIGHT-OF-WAY. THE WATER SERVICE LINE SHALL BE ONE CONTINUOUS PIECE WITH NO SPICES.
  - ALL POLY PIPE SHALL BE HIGH DENSITY POLY (IRON PIPE SIZE) MEETING ASTM D-2239-SIDR 7, BLUE IN COLOR, 200 PSI MINIMUM.
  - FOR A 1-1/2" WATER SERVICE, ALL MATERIAL SHALL BE 2" FROM THE WATER MAIN TO THE COPPERSETTER. REDUCE FROM 2" TO 1-1/2" IMMEDIATELY BEFORE COPPERSETTER.
  - THE STAINLESS STEEL METER FLANGE BOLTS SHALL BE 5/8" DIAMETER FOR THE 1-1/2" METER, AND 3/4" DIAMETER FOR THE 2" METER.
  - PROVIDE A 6" CIRCULAR VALVE BOX WITH COVER (APPLIED ENGINEERING PRODUCT MODEL 708 WITH GREEN LID OR AN APPROVED EQUAL) OVER BY-PASS VALVE.

CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
1-1/2" AND 2" WATER SERVICE CONNECTION  
CITY STANDARD 03.03.02



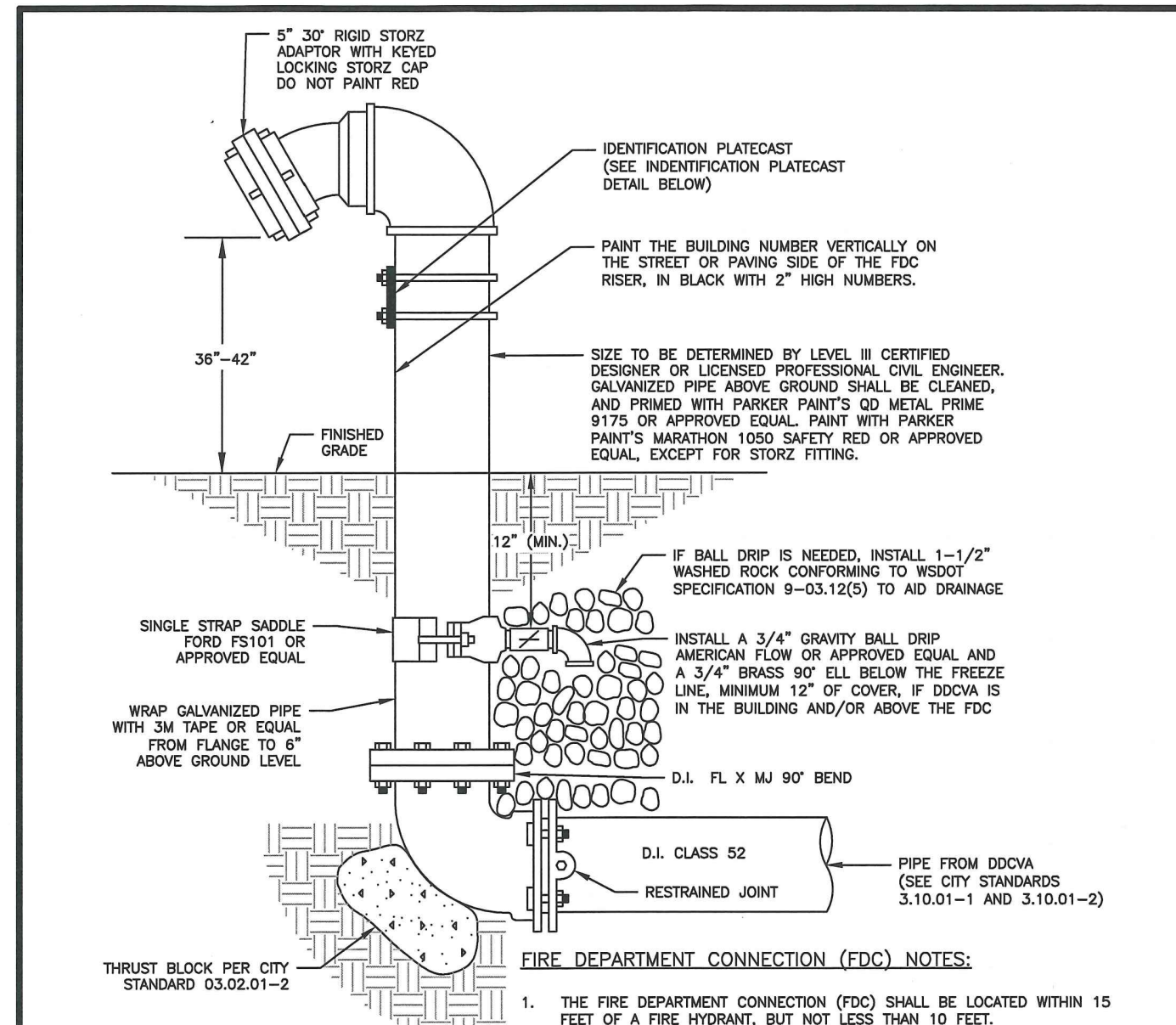
- NOTES:**
- BACKFLOW ASSEMBLY MUST BE SELECTED FROM WASHINGTON STATE DEPARTMENT OF HEALTH'S LIST OF BACKFLOW PREVENTION ASSEMBLIES APPROVED FOR INSTALLATION IN WASHINGTON STATE, LATEST EDITION.
  - THE DOVA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. IT SHALL BE TESTED AFTER INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACK-FLOW ASSEMBLY TESTER, TO INSURE ITS SATISFACTORY OPERATION BEFORE OCCUPANCY, AND ANNUALLY THEREAFTER. SEND TEST RESULTS TO: CITY OF PUYALLUP, WATER QUALITY OPERATIONS, 1100 39TH AVE SE, PUYALLUP, WA 98374.
  - DOVA MUST BE PURCHASED AS A UNIT. NO MODIFICATIONS TO THE ASSEMBLY ARE ALLOWED.
  - DOVA SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF WATER METER, WHEN IRRIGATION SYSTEM IS CONNECTED OFF DOMESTIC WATER LINE, IRRIGATION DOVA SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF THE BRANCH CONNECTION.
  - DOVA SHALL BE SIZED EQUAL OR COMPARABLE TO METER SIZE.
  - METER BOX SHALL BE LARGE ENOUGH TO ALLOW THE MINIMUM SETBACKS ILLUSTRATED ABOVE. METER BOX LID SHALL BE A TRAFFIC LID WITH A 14-20 LANDING.
  - DI-ELECTRIC UNIONS MUST BE USED TO SEPARATE DISSIMILAR MATERIALS.
  - USE ONLY BRASS OR COPPER BETWEEN THE METER AND THE UNION ON THE CUSTOMER'S SIDE OF THE DOVA.

CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
2" AND SMALLER DOUBLE CHECK VALVE ASSEMBLY INSTALLATION  
CITY STANDARD 03.04.01



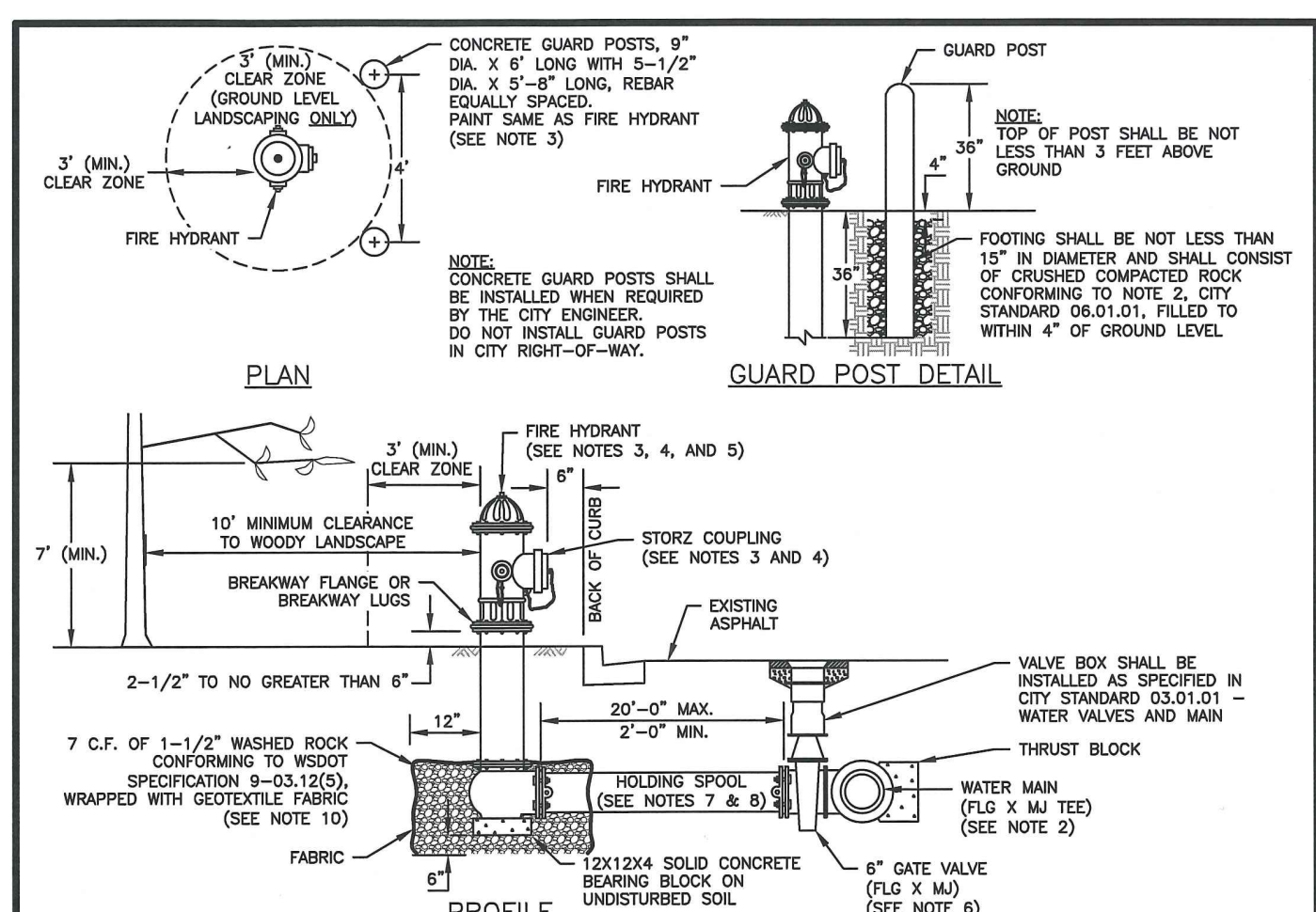
- NOTES:**
- BACKFLOW ASSEMBLY MUST BE SELECTED FROM WASHINGTON STATE DEPARTMENT OF HEALTH'S LIST OF BACKFLOW PREVENTION ASSEMBLIES APPROVED FOR INSTALLATION IN WASHINGTON STATE, LATEST EDITION.
  - THE RPBA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. IT SHALL BE TESTED AFTER INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACK-FLOW ASSEMBLY TESTER, TO INSURE ITS SATISFACTORY OPERATION BEFORE OCCUPANCY, AND ANNUALLY THEREAFTER. SEND TEST RESULTS TO: CITY OF PUYALLUP, WATER QUALITY OPERATIONS, 1100 39TH AVE SE, PUYALLUP, WA 98374.
  - THE RPBA MUST BE PURCHASED AS A UNIT. NO MODIFICATIONS TO THE ASSEMBLY ARE ALLOWED.
  - THE RPBA SHALL NOT BE INSTALLED IN A PIT BELOW GROUND LEVEL.
  - THE PROTECTIVE COVERING FOR THE RPBA, WHICH PROTECTS THE ASSEMBLY FROM FREEZING, MUST INCLUDE A DAYLIGHT DRAIN. THE DRAIN MUST BE INSTALLED ABOVE GROUND OR ABOVE THE MAXIMUM FLOOD LEVEL, WHICHEVER IS HIGHER. THE DRAIN MUST BE A MINIMUM OF TWICE THE SIZE OF THE RPBA, TO BE ABLE TO HANDLE THE VOLUME OF WATER THAT POTENTIALLY COULD BE DISCHARGED FROM THE RELIEF VALVE PORT.
  - THE RPBA SHALL BE SIZED EQUAL OR COMPARABLE TO THE METER SIZE.
  - USE ONLY BRASS OR COPPER BETWEEN THE METER AND THE BOTTOM VERTICAL 90 DEGREE BEND ON THE CUSTOMER'S SIDE OF THE RPBA.
  - DI-ELECTRIC UNIONS MUST BE USED TO SEPARATE DISSIMILAR MATERIALS.
  - THE RPBA SHOULD BE LOCATED IMMEDIATELY DOWN STREAM OF THE METER, AND SHOULD NOT BE INSTALLED INSIDE A BUILDING.
  - AN RPBA INSTALLED MORE THAN FIVE (5) FEET ABOVE FLOOR LEVEL MUST HAVE A PLATFORM UNDER IT FOR THE TESTER OR MAINTENANCE PERSON TO STAND ON. THE PLATFORM MUST BE OSHA APPROVED AND MEET ALL APPLICABLE SAFETY STANDARDS AND CODES.

CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
2" AND SMALLER REDUCED PRESSURE BACKFLOW ASSEMBLY INSTALLATION  
CITY STANDARD 03.04.02



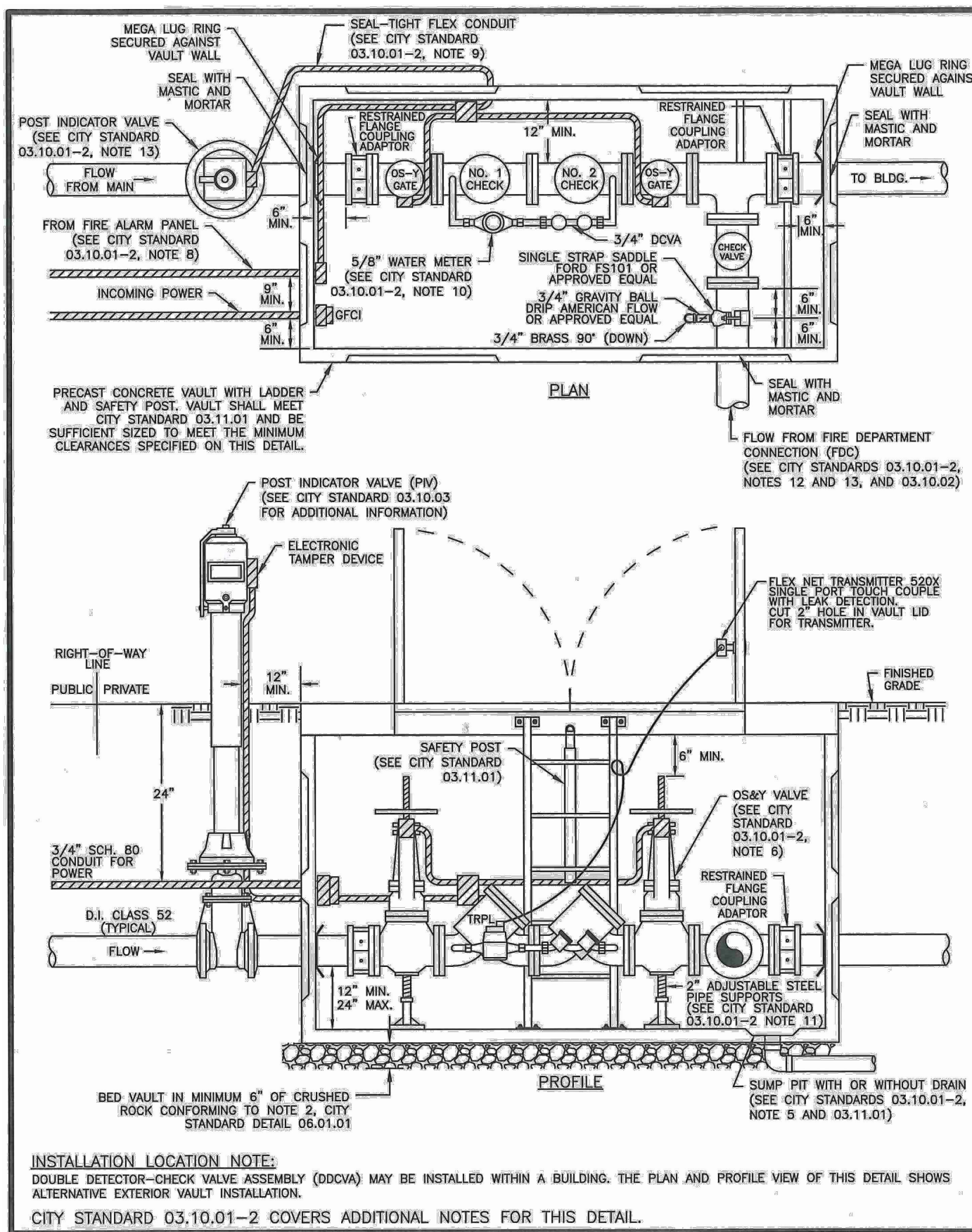
- IDENTIFICATION PLATECAST DETAIL NOTES:**
- IDENTIFICATION PLATECAST WILL BE BRASS
  - IDENTIFICATION PLATECAST WILL BE 1/4" THICK
  - LETTERS WILL BE ONE INCH HIGH AND RAISED
  - USE TWO (2) ZINC U-BOLTS TO AFFIX TO PIPE

CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
FIRE DEPARTMENT CONNECTION (FDC)  
CITY STANDARD 03.10.02

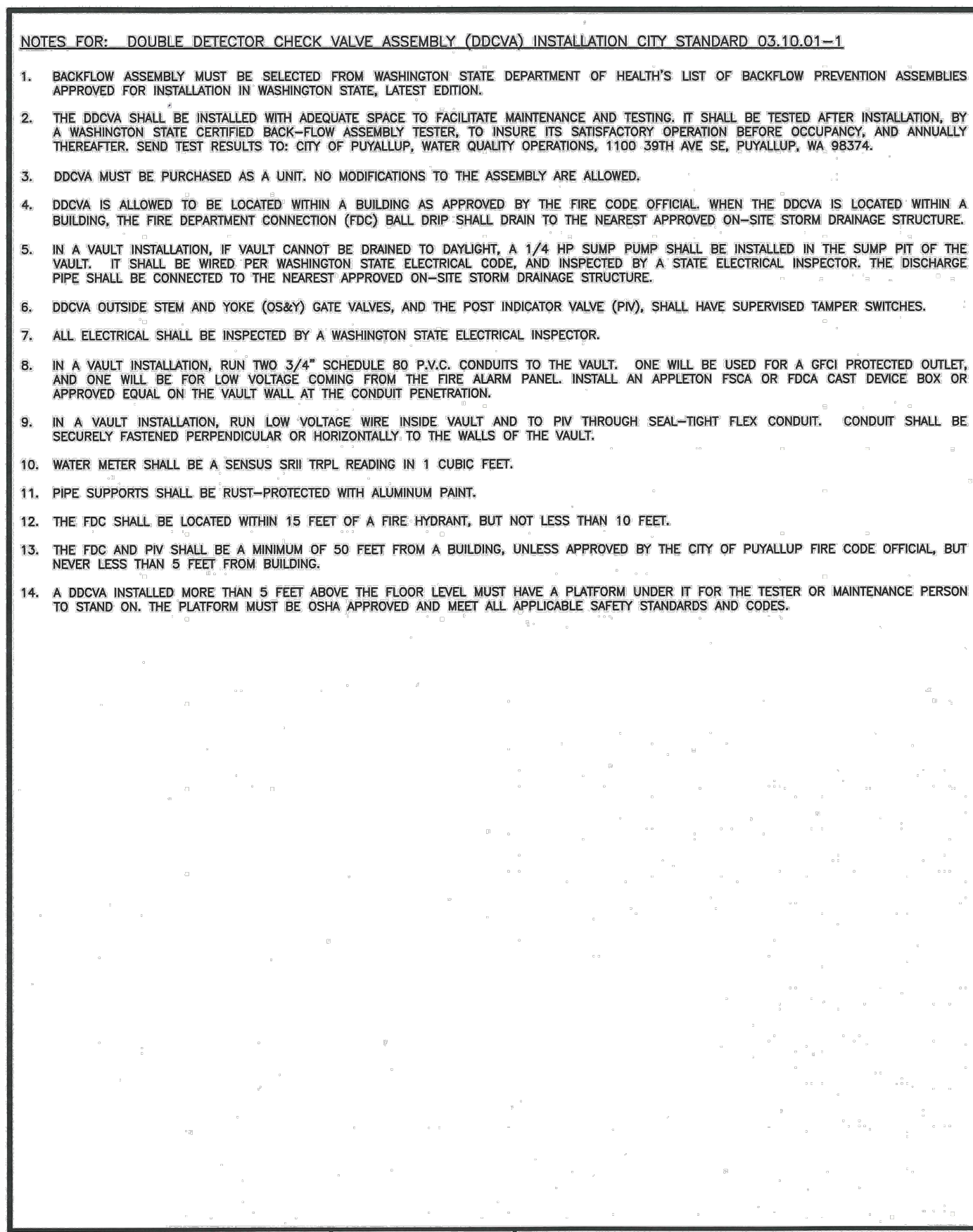


- NOTES:**
- ALL MATERIALS AND FITTINGS SHALL BE AS SPECIFIED OR APPROVED EQUAL.
  - WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM 48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.
  - THE FIRE HYDRANT AND CONCRETE GUARD POSTS SHALL BE PAINTED, RUST-OLEUM SAFETY YELLOW #7543 (TWO COATS) OR AN APPROVED EQUAL. THE STORZ FITTING SHALL NOT BE PAINTED.
  - FIRE HYDRANTS SHALL HAVE TWO 2-1/2" HOSE PORTS (NATIONAL STANDARD THREAD) WITH CAPS AND CHAINS AND ONE 4" PLUMBER PORT (OR TACOMA STEAMER PORT THREAD) WITH A 2" STORZ COUPLING AND BLIND CAP INSTALLED ON THE STEAMER PORT. (STEAMER PORT SHALL FACE THE STREET). 1-1/4" PENTAGONAL OPERATING NUT (COUNTER-CLOCKWISE OPENING), O-RING TYPE STUFFING BOX, AUTOMATIC BARREL, DRIVING AND 1-1/4" MAIN VALVE OPERATING HYDRANTS SHALL BE DESIGNED IN A MANNER THAT WILL PREVENT BARREL BREAKAGE WHEN STRUCK BY A VEHICLE. HYDRANTS SHALL CONFORM TO THE LATEST REVISION OF AWMA SPECIFICATIONS NO. C 502-73 FOR FIRE HYDRANTS FOR ORDINARY WATER SERVICE. FIRE HYDRANTS SHALL INCLUDE THE ENTIRE ASSEMBLY COMPLETE, INCLUDING HYDRANT, GATE VALVE AND BOX, CONNECTING PIPING, FITTINGS, AND ACCESSORIES.
  - FIRE HYDRANTS SHALL BE AWK, CLOW MEDALLION, M & H 929, MUELLER CENTURION, OR WATERIOUS.
  - GATE VALVES SHALL CONFORM TO THE LATEST AWMA SPECIFICATIONS FOR COLD WATER, RESILIENT SEATED WEDGE GATE VALVES, 200 PSI WORKING PRESSURE. THEY SHALL BE IRON-BODED BRONZE-MOUNTED, NON-RISING STEM, COUNTER-CLOCKWISE OPENING, MECHANICAL JOINT BY FLANGED. VALVE STEM SHALL BE PROVIDED WITH O-RING SEALS AND SHALL BE AS MANUFACTURED BY THE MANUFACTURER OR APPROVED EQUAL.
  - THE HOLDING SPOOL SHALL BE A MECHANICAL-JOINT (M.J.) HOLDING SPOOL, WITH THE USE OF MEGA-LUG CONNECTORS OR APPROVED EQUAL WITH CLASS 52 DUCTILE IRON PIPE.
  - IF DISTANCE BETWEEN WATER MAIN AND FIRE HYDRANT IS GREATER THAN 17 FEET, A RESTRAINED JOINT IS REQUIRED ON ADDITIONAL JOINT. MAXIMUM HYDRANT RUN ALLOWED IS 20 FEET.
  - FIRE HYDRANTS SHALL BE LOCATED A MINIMUM OF 50 FEET FROM A BUILDING OR STRUCTURE.
  - THE CONTRACTOR SHALL PLACE A 6 OZ. GEOTEXTILE FABRIC AROUND THE WASHED ROCK AREA ENDS TO OVERLAP.
  - A FLUORESCENT ORANGE BAG MUST COVER AND BE SECURED TO THE FIRE HYDRANT UNTIL APPROVED FOR USE BY CITY ENGINEER.
  - A MINIMUM THREE FOOT (3') RADIUS UNSTRUCTURED CLEAR ZONE (WORK AREA) SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. ADDITIONALLY, NO WOODED LANDSCAPE SHALL BE PLANTED WITHIN TEN FEET (10') OF ANY FIRE HYDRANT. OVERHANGING BRANCHES OF TREES ADJACENT TO HYDRANTS SHALL HAVE A MAINTAINED VERTICAL CLEARANCE OF SEVEN (7) FEET ABOVE FINISHED GRADE OF THE FIRE HYDRANT.

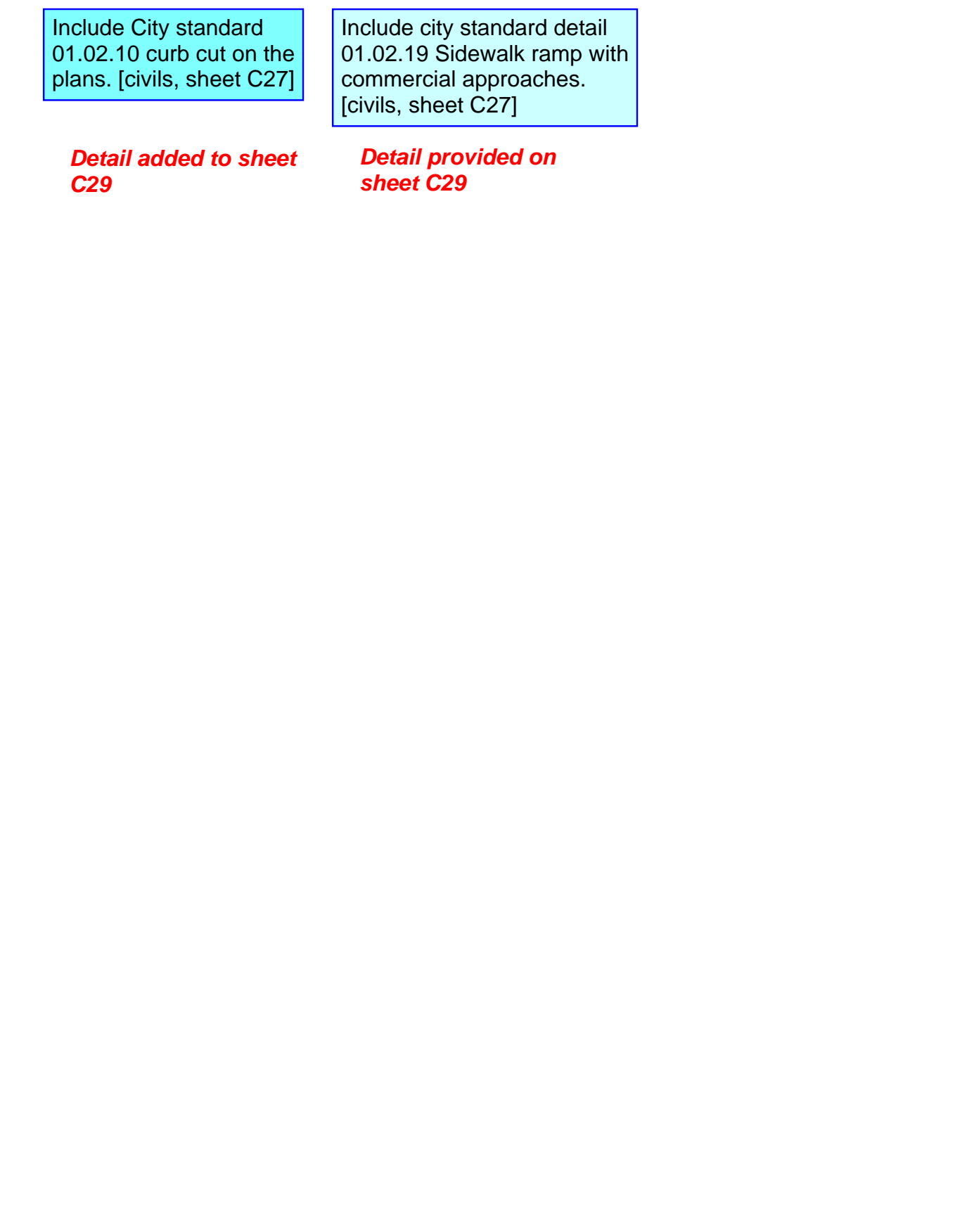
CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
FIRE HYDRANT ASSEMBLY  
CITY STANDARD 03.05.01



CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
DOUBLE DETECTOR-CHECK VALVE ASSEMBLY INSTALLATION  
CITY STANDARD 03.10.01-1



CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
DOUBLE DETECTOR-CHECK VALVE ASSEMBLY INSTALLATION (NOTES)  
CITY STANDARD 03.10.01-2



CITY OF PUYALLUP OFFICE OF THE CITY ENGINEER  
AUTO SPRINKLER IDENTIFICATION PLATECAST DETAIL  
CITY STANDARD 03.10.03

APPROVED  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.  
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

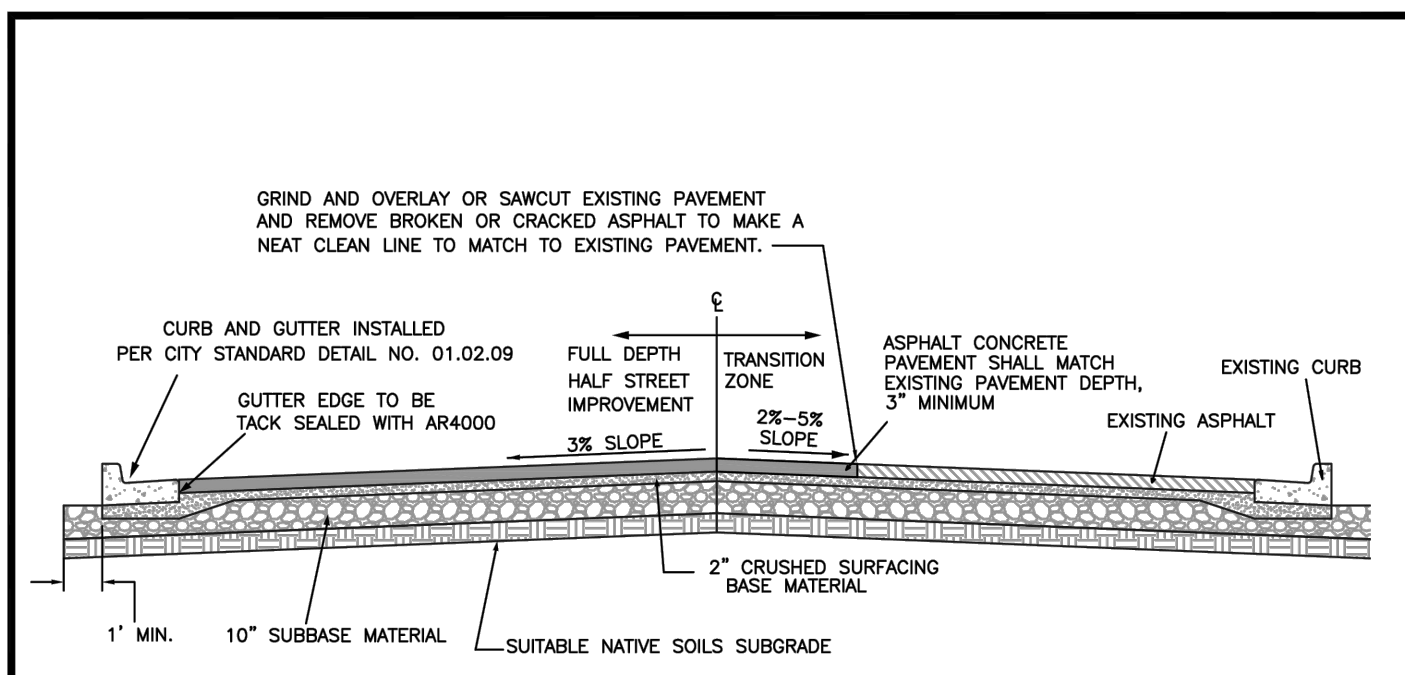
Job Number: 22085  
Sheet: C27 of 34  
Title: CONSTRUCTION DETAILS  
FORTRESS - PUYALLUP  
For: CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049  
Scale: Horizontal NA Vertical N/A  
Designed: DL  
Drawn: RDC  
Checked: DL  
Approved: JGH  
Date: 8/23/23  
Barghausen Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com  
Professional Engineer  
3880  
3/05/2024  
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Revision

2	03/05/24	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	02/27/24	DL	JSG	BID SET
1	12/06/23	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023



# CONSTRUCTION DETAILS

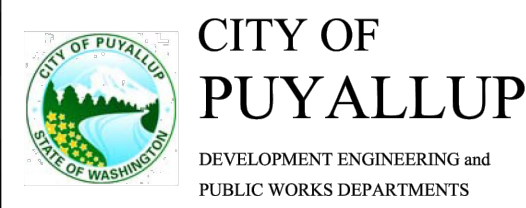


**NOTES:**

- ALL DEPTHS ARE MINIMUM COMPACTED DEPTHS.
- SUBGRADE PREPARATION SHALL MEET THE REQUIREMENTS OF WSDOT STANDARD SPEC. 2-04.3(1). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE COMPACTION REQUIREMENTS AND CONTROL ALL WORK. THE CITY OF PUYALLUP RESERVES THE RIGHT TO REQUIRE TESTS AT THE CONTRACTOR'S EXPENSE.
- SUBBASE MATERIAL SHALL BE GRAVEL BORROW MEETING THE REQUIREMENTS OF WSDOT STANDARD SPEC. 9-03.14(1) OR CRUSHED BALLAST MEETING THE REQUIREMENTS OF WSDOT STANDARD SPEC. 9-03.9(1). CRUSHED SURFACING SHALL MEET THE GRADATION REQUIREMENTS OF WSDOT STANDARD SPEC. 9-03.9(3). THE SUBBASE AND BASE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD SPEC. 4-04.
- SOIL STABILIZATION FABRIC MAY BE REQUIRED BY THE DEVELOPMENT REVIEW ENGINEER TO BE INSTALLED PRIOR TO THE INSTALLATION OF THE BASE MATERIAL. WHEN REQUIRED, THE CONTRACTOR SHALL PLACE A GEOTEXTILE FABRIC OVER THE PREPARED SUBGRADE WITH A TWO FOOT MINIMUM OVERLAP. THE FABRIC SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
- ASPHALT CONCRETE PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT STANDARD SPEC 5-04. DESIGN ENGINEER SHALL SUBMIT A STATE APPROVED HMA MIX FOR APPROVAL.
- TEMPERATURE SHALL NOT EXCEED 325°F AT DISCHARGE OF THE PLANT NOR BE LESS THAN 185°F LEAVING THE SPREADER BOX.
- THE MAXIMUM COMPACTED THICKNESS OF ANY SINGLE LIFT SHALL MEET WSDOT STANDARD SPEC. 5-04.5(9) TO A MINIMUM AVERAGE COMPACTED DRY DENSITY OF 91 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY WSDOT TEST METHOD SPECIFIED IN STANDARD SPEC. 5-04.3(10)B. PERIODIC COMPLIANCE TESTS SHALL BE MADE BY A CERTIFIED TESTING AGENCY AT THE EXPENSE OF THE CONTRACTOR.
- THE FACE OF THE GUTTER LIP AND EDGES OF EXISTING ASPHALT MEET LINES SHALL BE TACK COATED PRIOR TO PAVEMENT PLACEMENT. WHEN SUCCESSIVE LIFTS OF ASPHALT ARE REQUIRED, A TACK COAT SHALL BE DISTRIBUTED UNIFORMLY OVER THE PREVIOUS LIFT AT A RATE OF 0.06-0.08 GALLONS PER SQUARE YARD AT A TEMPERATURE OF 100°F AND SHALL BE ALLOWED TO SET TO A TACKY STATE PRIOR TO THE PLACEMENT OF THE NEXT LIFT.
- ALL MEET LINES BETWEEN LIFTS OF ASPHALT SHALL BE UNIFORM AND VERTICAL. THE MEET LINES SHALL BE CLEANED AND TACK COATED.
- ANY CHANGES TO THE STANDARD PAVEMENT SECTION SHALL REQUIRE APPROVAL BY THE DEVELOPMENT REVIEW ENGINEER. A STRUCTURAL PAVEMENT CROSS SECTION DESIGN WITH CALCULATIONS SHALL BE REQUIRED.
- ALL MANHOLE FRAMES, VALVE FRAMES AND MONUMENT COVERS SHALL BE INSTALLED AFTER PLACEMENT OF ASPHALT. IF MORE THAN ONE LIFT IS NECESSARY, FRAMES AND LIDS WILL BE ADJUSTED TO FINISH GRADE AT FIRST LIFT AS DIRECTED BY THE CITY.
- ASPHALT SHALL BE HMA CL 1/2" PG 64-22

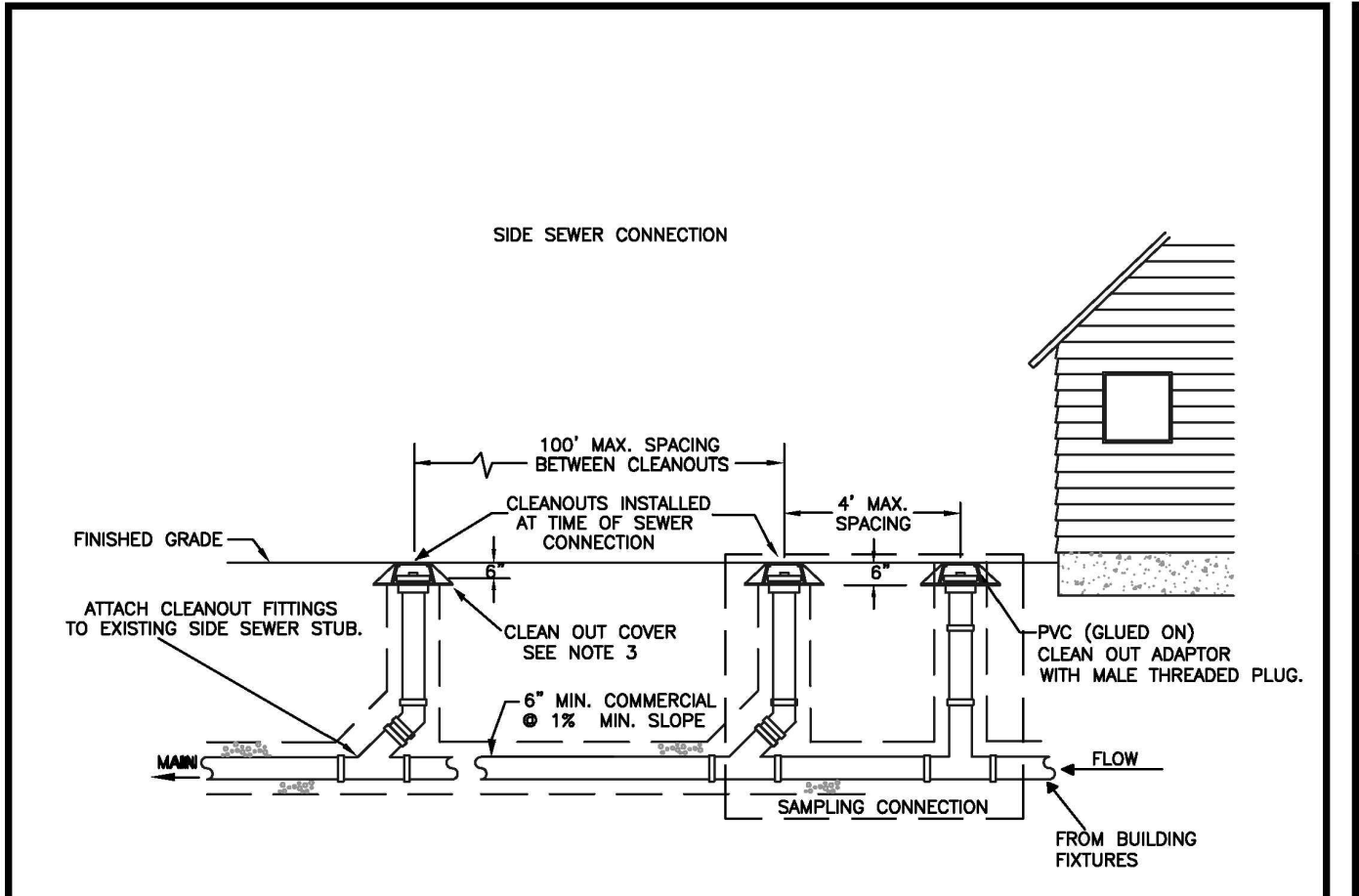
Include city standard detail  
02.01.09 storm drain  
cleanout. [civils, sheet 29]

Details added to sheet  
C29



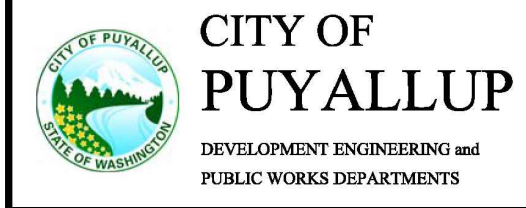
## HALF STREET IMPROVEMENT

DESIGNED BY JIM ERWIN-SVORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISED BY XXXX	CITY STANDARD
FILE NAME P:\PROJECTS\CADD\CITY\20086_2701610101.DWG	DATE APPROVED 02/27/24	DATE REVISION 02/27/24	SCALE AS SHOWN	01.01.19



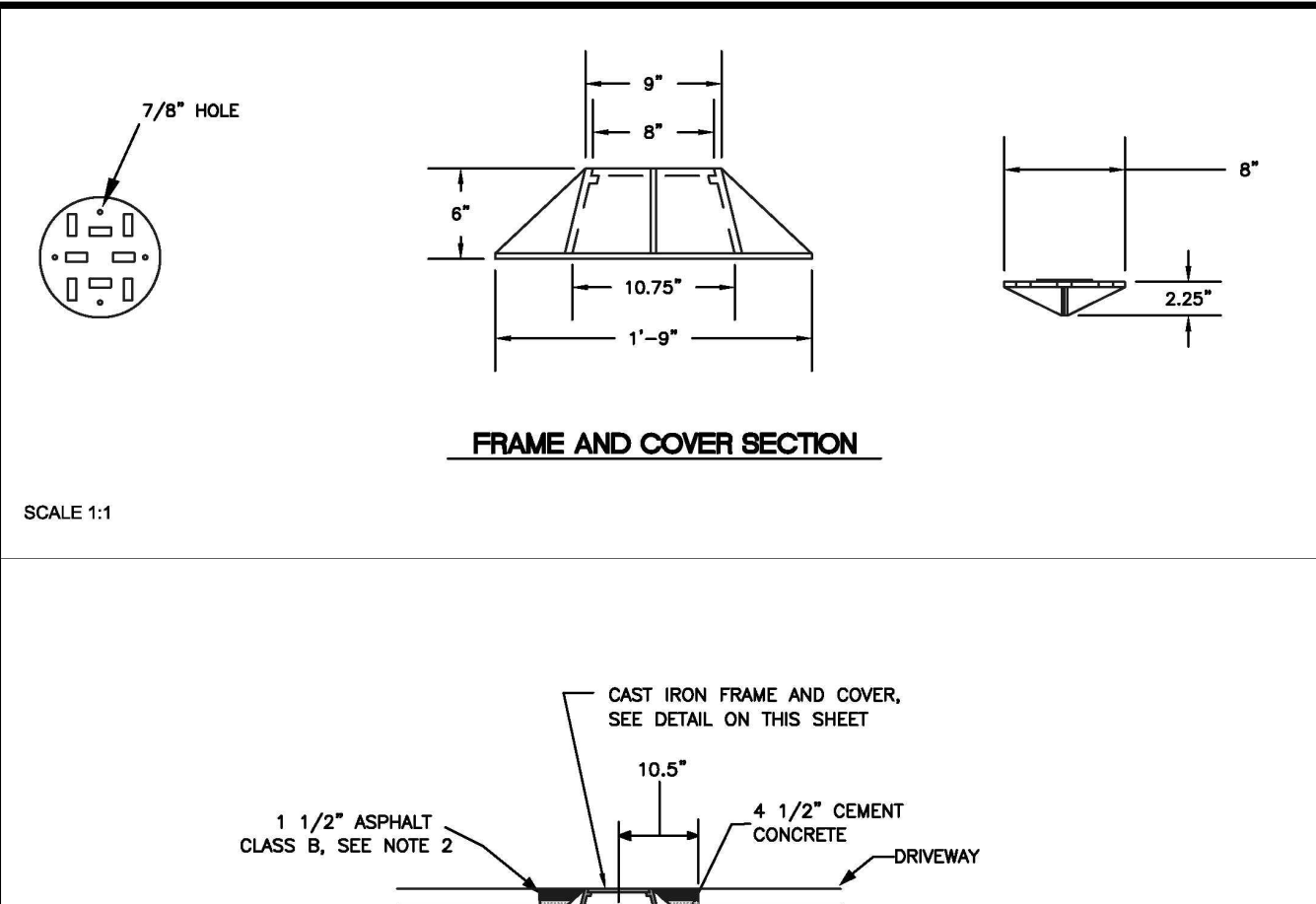
**NOTES:**

- SAMPLING CONNECTION SHALL BE INSTALLED OUT SIDE WITH UNOBSTRUCTED ACCESS AT ALL TIMES.
- A SAMPLING CONNECTION SHALL BE INSTALLED FOR EACH COMMERCIAL / RETAIL UNIT OR SPACE.
- CLEAN OUT AND SAMPLING CONNECTION COVERS:
  - FOR NON-VEHICULAR TRAFFIC INSTALLATIONS USE "CARSON" MODEL 910 GREEN YARD BOX WITH BOLT DOWN LID MARKED SEWER OR APPROVED EQUAL.
  - FOR ASPHALT, GRAVEL OR TRAFFIC INSTALLATIONS SEE CITY STANDARD DETAIL NO. 04.03.05 FRAME AND COVER SECTION.
- EACH CLEANOUT ASSEMBLY SHALL CONSIST OF: ONE CLEANOUT ADAPTER, HUB x FEMALE, PVC SI AND ONE CLEANOUT PLUG, MORT WITH RAISED NUT, PVC SDR35.



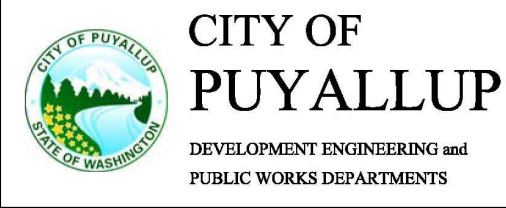
## COMMERCIAL SIDE SEWER CONNECTION WITH SAMPLING CONNECTION

DESIGNED BY JIM ERWIN-SVORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISED BY XXXX	CITY STANDARD
FILE NAME P:\PROJECTS\CADD\CITY\20086_2701610101.DWG	DATE APPROVED 02/27/24	DATE REVISION 02/27/24	SCALE AS SHOWN	04.03.04



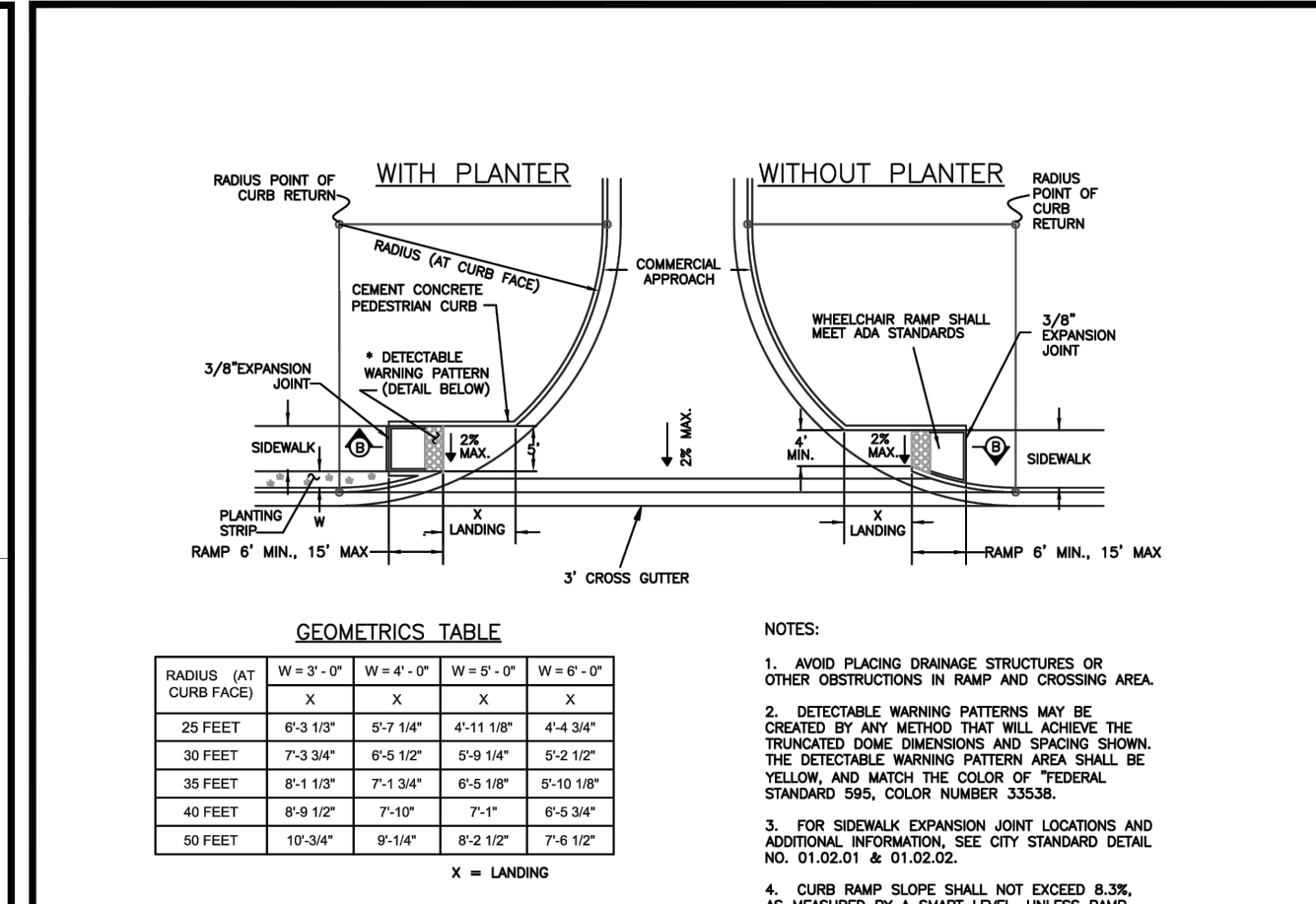
**NOTES:**

- NEAT LINE CUT SHALL BE SEALED AT THE TOP WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.
- ALL MATERIAL SHALL CONFORM TO THE 1991 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
- MACHINE BEARING FACES OF FRAME AND COVER TO INSURE POSITIVE FIT.
- EACH CLEAN OUT ASSEMBLY SHALL CONSIST OF: ONE CLEAN OUT ADAPTOR (HUB X FEMALE INSIDE PIPE THREAD, P.V.C. SLIP IN), AND ONE CLEAN OUT PLUG (MALE OUTSIDE PIPE THREAD WITH RAISED NUT, P.V.C. SDR35).



## SIDE SEWER CLEAN OUT WHEN PLACED IN DRIVEWAY

DESIGNED BY JIM ERWIN-SVORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISED BY XXXX	CITY STANDARD
FILE NAME P:\PROJECTS\CADD\CITY\20086_2701610101.DWG	DATE APPROVED 02/27/24	DATE REVISION 02/27/24	SCALE AS SHOWN	04.03.05

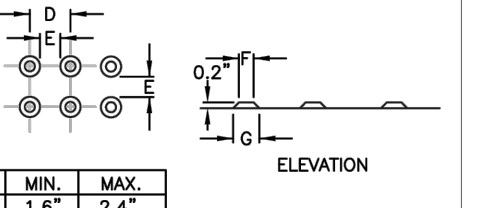


RADIUS (AT CURB FACE)	W=3'-0"	W=4'-0"	W=5'-0"	W=6'-0"
25 FEET	6'-3 1/2"	6'-7 1/4"	6'-11 1/8"	6'-4 3/4"
30 FEET	7'-3 3/4"	6'-9 1/2"	6'-8 1/4"	6'-2 1/2"
35 FEET	8'-1 1/2"	7'-3 3/8"	6'-8 1/8"	6'-0 1/8"
40 FEET	8'-4 1/2"	7'-1"	7'-1"	6'-5 3/4"
50 FEET	10'-3 3/4"	9'-1 1/4"	8'-3 1/2"	7'-6 1/2"

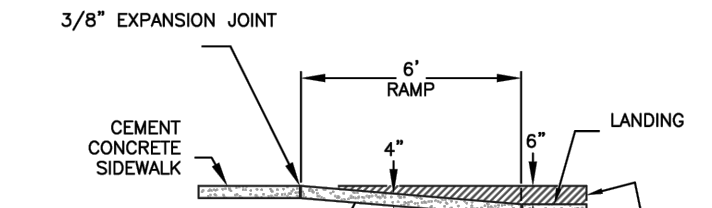
X = LANDING

- NOTES:**
- AVOID PLACING DRAINAGE STRUCTURES OR OTHER OBSTRUCTIONS IN RAMP AND CROSSING AREA.
  - DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SIGNAL. THE DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW AND MATCH THE COLOR OF TYPICAL STANDARD 595, COLOR NUMBER 33038.
  - FOR SIDEWALK EXPANSION JOINT LOCATIONS AND ADDITIONAL INFORMATION, SEE CITY STANDARD DETAIL NO. 01.02.01 @ 91.02.02.
  - CURB RAMP SLOPE SHALL NOT EXCEED 8.3% AS MEASURED BY A SMART LEVEL, UNLESS RAMP LENGTH IS EXTENDED TO 15'.

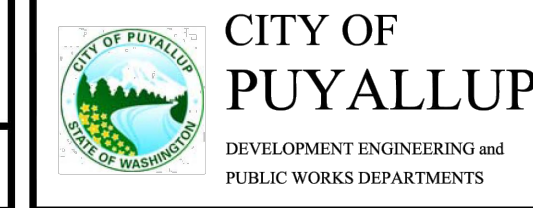
CURB RAMP GRADE	PROWAG UP-HILL RAMP LENGTH	PROWAG RAMP SLOPE
0.5%	6'-0"	6.3%
1.5%	7'-0"	6.3%
3%	9'-0"	6.3%
5%	15'	6.3%
7%	15'	10.3%
9%	15'	12.3%



DETECTABLE WARNING PATTERN DETAIL



SECTION B



## SIDEWALK RAMP WITH COMMERCIAL APPROACHES

DESIGNED BY JIM ERWIN-SVORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISED BY XXXX	CITY STANDARD
FILE NAME P:\PROJECTS\CADD\CITY\20086_2701610101.DWG	DATE APPROVED 02/27/24	DATE REVISION 02/27/24	SCALE AS SHOWN	01.02.19

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	JSG	JSG
	02/27/24	DL	JSG	JSG
1	12/06/23	DL	JSG	JSG

## CONSTRUCTION DETAILS

### FORTRESS - PUYALLUP

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

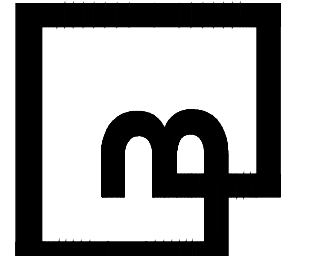


Scale:

Horizontal	NA
Vertical	N/A

Designed: DL  
Drawn: RDC  
Checked: DL  
Approved: JGH  
Date: 6/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
[barghausen.com](http://barghausen.com)



Job Number  
**22085**  
Sheet  
**C29** of **34**

**APPROVED**

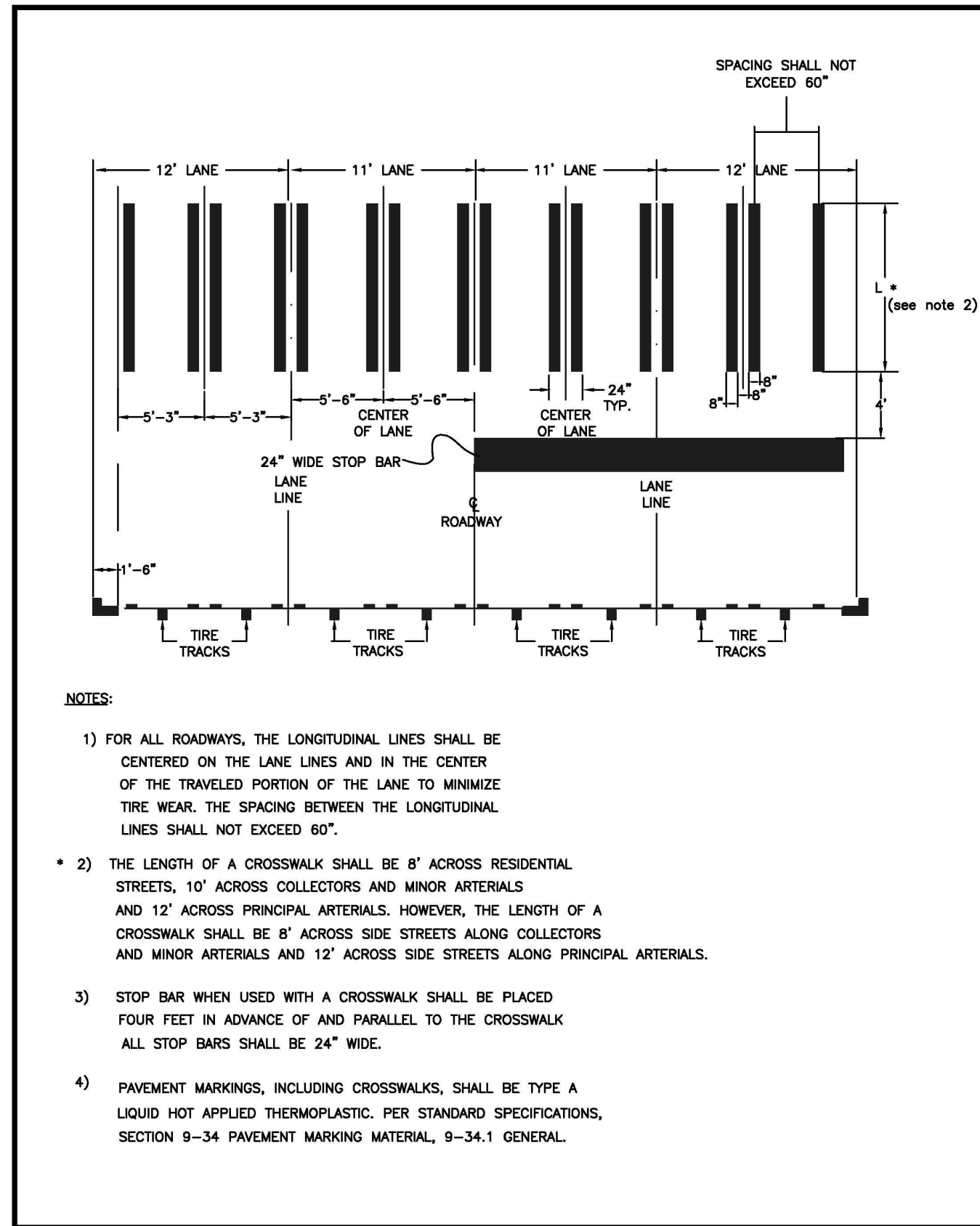
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

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# CONSTRUCTION DETAILS

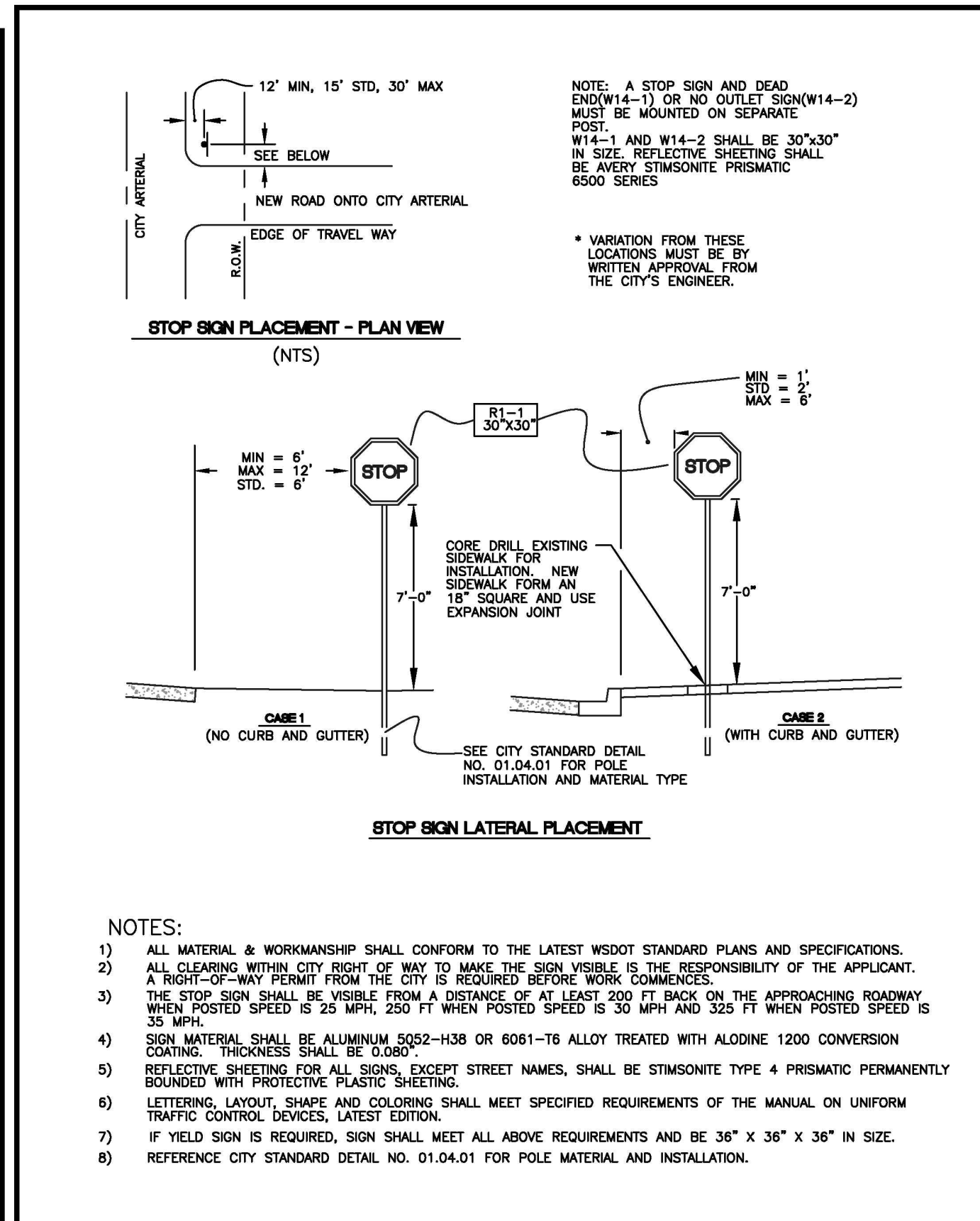


- NOTES:**
- 1) FOR ALL ROADWAYS, THE LONGITUDINAL LINES SHALL BE CENTERED ON THE LANE LINES AND IN THE CENTER OF THE TRAVELED PORTION OF THE LANE TO MINIMIZE TIRE WEAR. THE SPACING BETWEEN THE LONGITUDINAL LINES SHALL NOT EXCEED 60".
  - 2) THE LENGTH OF A CROSSWALK SHALL BE 8' ACROSS RESIDENTIAL STREETS, 10' ACROSS COLLECTORS AND MINOR ARTERIALS AND 12' ACROSS PRINCIPAL ARTERIALS. HOWEVER, THE LENGTH OF A CROSSWALK SHALL BE 8' ACROSS SIDE STREETS ALONG COLLECTORS AND MINOR ARTERIALS AND 12' ACROSS SIDE STREETS ALONG PRINCIPAL ARTERIALS.
  - 3) STOP BAR WHEN USED WITH A CROSSWALK SHALL BE PLACED FOUR FEET IN ADVANCE OF AND PARALLEL TO THE CROSSWALK ALL STOP BARS SHALL BE 24" WIDE.
  - 4) PAVEMENT MARKINGS, INCLUDING CROSSWALKS, SHALL BE TYPE A LIQUID HOT APPLIED THERMOPLASTIC, PER STANDARD SPECIFICATIONS, SECTION 9-34 PAVEMENT MARKING MATERIAL, 9-34.1 GENERAL.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**CROSSWALK DETAIL**

DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/4"	01.03.11

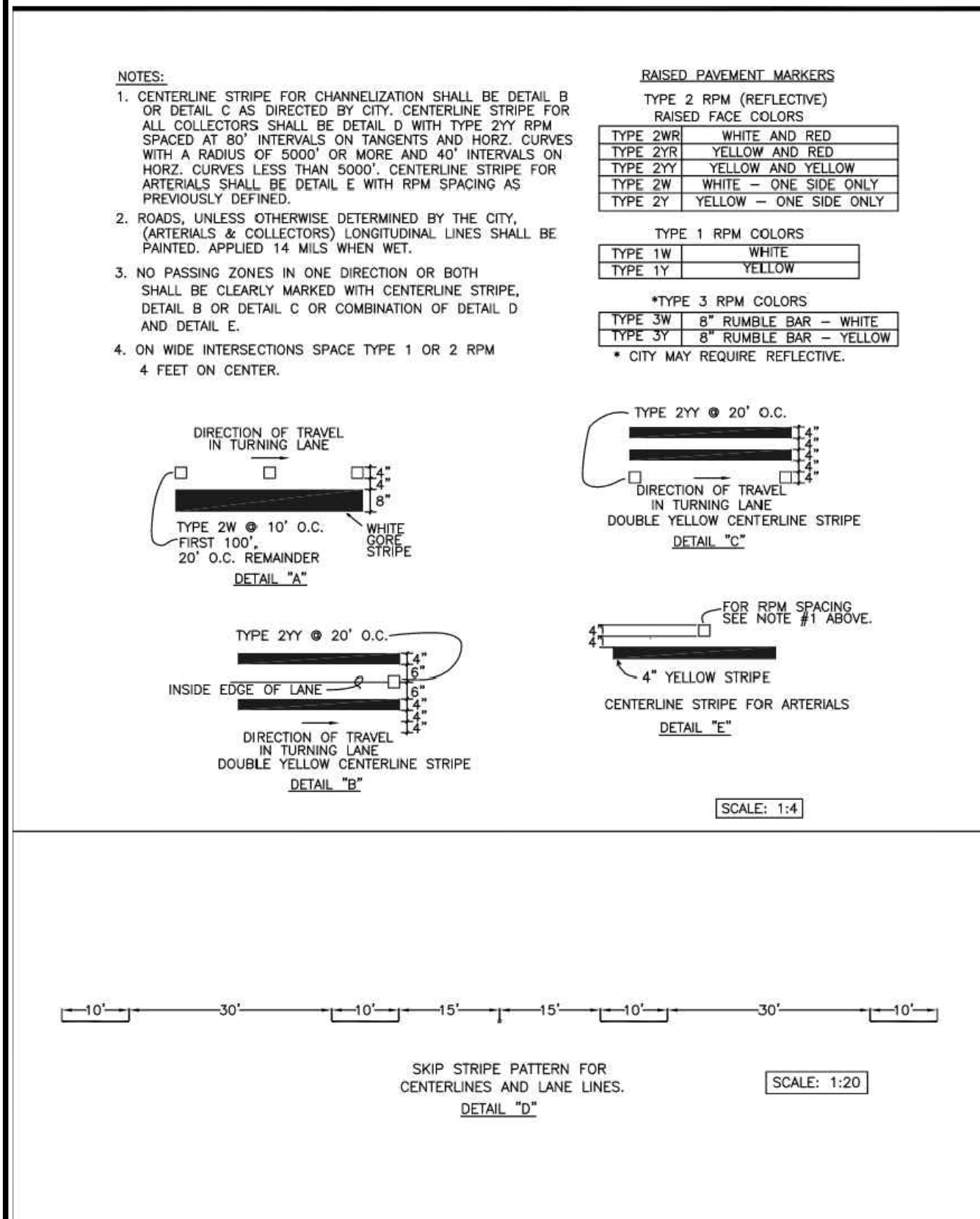


- NOTES:**
- 1) ALL MATERIAL & WORKMANSHIP SHALL CONFORM TO THE LATEST WSDOT STANDARD PLANS AND SPECIFICATIONS.
  - 2) ALL CLEARING WITHIN CITY RIGHT OF WAY TO MAKE THE SIGN VISIBLE IS THE RESPONSIBILITY OF THE APPLICANT. A RIGHT-OF-WAY PERMIT FROM THE CITY IS REQUIRED BEFORE WORK COMMENCES.
  - 3) THE STOP SIGN SHALL BE VISIBLE FROM A DISTANCE OF AT LEAST 200 FT BACK ON THE APPROACHING ROADWAY WHEN POSTED SPEED IS 25 MPH, 250 FT WHEN POSTED SPEED IS 30 MPH AND 325 FT WHEN POSTED SPEED IS 35 MPH.
  - 4) SIGN MATERIAL SHALL BE ALUMINUM 5052-H38 OR 6061-T6 ALLOY TREATED WITH ALDOLINE 1200 CONVERSION COATING. THICKNESS SHALL BE 0.080".
  - 5) REFLECTIVE SHEETING FOR ALL SIGNS, EXCEPT STREET NAMES, SHALL BE STIMSONITE TYPE 4 PRISMATIC PERMANENTLY BOUNDED WITH PROTECTIVE PLASTIC SHEETING.
  - 6) LETTERING, LAYOUT, SHAPE AND COLORING SHALL MEET SPECIFIED REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  - 7) IF YIELD SIGN IS REQUIRED, SIGN SHALL MEET ALL ABOVE REQUIREMENTS AND BE 36" x 36" x 36" IN SIZE. REFERENCE CITY STANDARD DETAIL NO. 01.04.01 FOR POLE MATERIAL AND INSTALLATION.
  - 8) REFERENCE CITY STANDARD DETAIL NO. 01.04.01 FOR POLE MATERIAL AND INSTALLATION.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**STOP SIGN DETAIL**

DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/2"	01.04.02

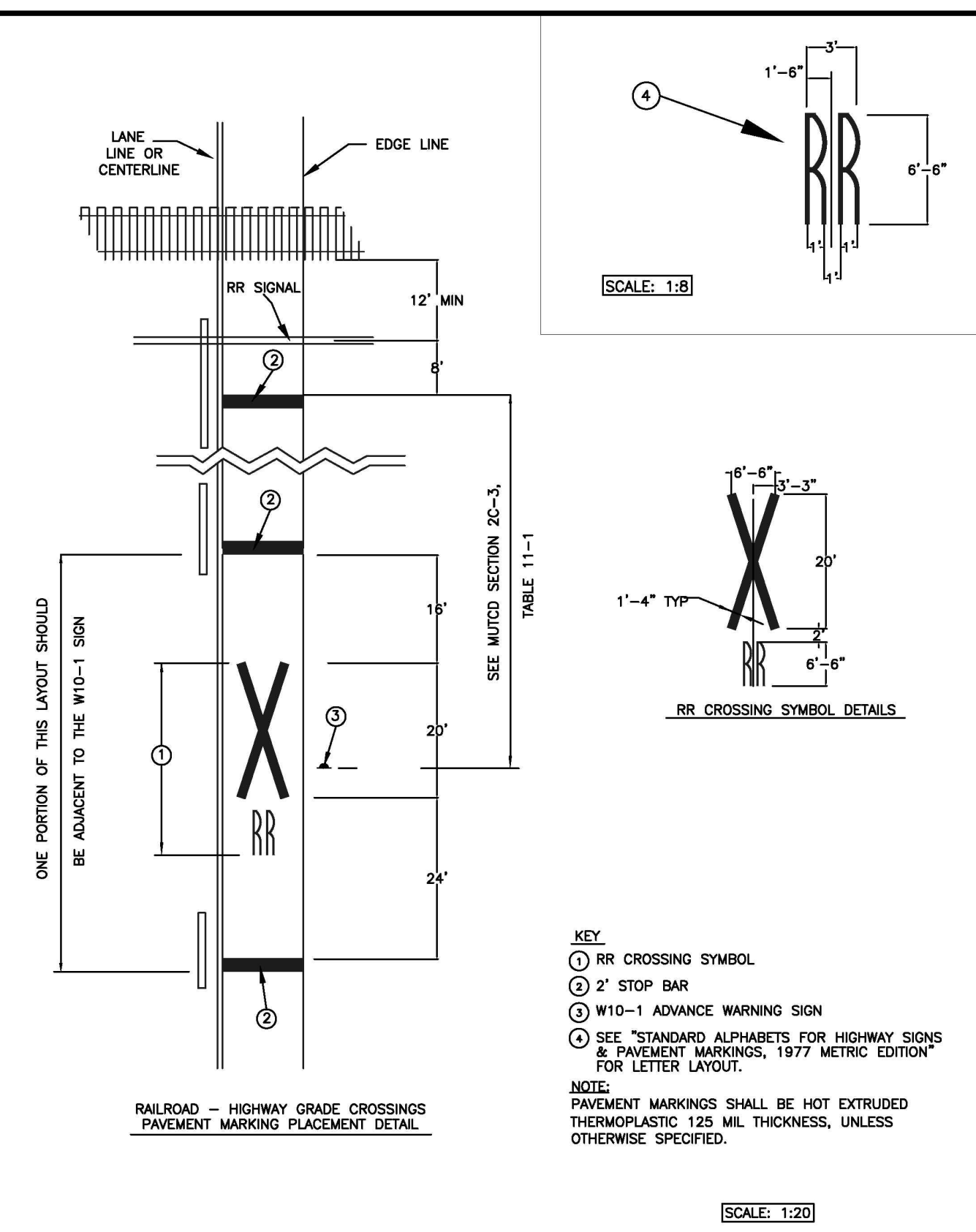


- NOTES:**
- 1) CENTERLINE STRIPE FOR CHANNELIZATION SHALL BE DETAIL B OR DETAIL C AS DIRECTED BY CITY. CENTERLINE STRIPE FOR ALL COLLECTORS SHALL BE DETAIL D WITH TYPE 2YI RPM SPACED AT 80' INTERVALS ON TANGENTS AND HORIZ. CURVES WITH A RADIUS OF 5000' OR MORE AND 40' INTERVALS ON HORIZ. CURVES LESS THAN 5000'. CENTERLINE STRIPE FOR ARTERIALS SHALL BE DETAIL E WITH RPM SPACING AS PREVIOUSLY DEFINED.
  - 2) ROADS, UNLESS OTHERWISE DETERMINED BY THE CITY (ARTERIALS & COLLECTORS) LONGITUDINAL LINES SHALL BE PAINTED. APPLIED 14 MILS WHEN WET.
  - 3) NO PASSING ZONES IN ONE DIRECTION OR BOTH SHALL BE CLEARLY MARKED WITH CENTERLINE STRIPE, DETAIL B OR DETAIL C OR COMBINATION OF DETAIL D AND DETAIL E.
  - 4) ON WIDE INTERSECTIONS SPACE TYPE 1 OR 2 RPM 4 FEET ON CENTER.
- RAISED PAVEMENT MARKERS**  
RAISED FACE COLORS
- |          |                        |
|----------|------------------------|
| TYPE 2YR | WHITE AND RED          |
| TYPE 2YB | YELLOW AND RED         |
| TYPE 2YI | YELLOW AND YELLOW      |
| TYPE 2W  | WHITE - ONE SIDE ONLY  |
| TYPE 2Y  | YELLOW - ONE SIDE ONLY |
- TYPE 1 RPM COLORS**
- |         |        |
|---------|--------|
| TYPE 1W | WHITE  |
| TYPE 1Y | YELLOW |
- TYPE 3 RPM COLORS**
- |         |                        |
|---------|------------------------|
| TYPE 3W | 8" RUMBLE BAR - WHITE  |
| TYPE 3Y | 8" RUMBLE BAR - YELLOW |
- TYPE 2YI RPM O.C.**
- |                     |  |
|---------------------|--|
| TYPE 2YI @ 20' O.C. | DOUBLE YELLOW CENTERLINE STRIPE DETAIL "C" |
| TYPE 2YI @ 10' O.C. | WHITE CENTERLINE STRIPE DETAIL "A"         |
| TYPE 2YI @ 20' O.C. | INSIDE EDGE OF LANE DETAIL "B"             |
| TYPE 2YI @ 20' O.C. | DOUBLE YELLOW CENTERLINE STRIPE DETAIL "D" |
- TYPE 2YI RPM O.C.**
- |                     |   |
|---------------------|---|
| TYPE 2YI @ 20' O.C. | FOR RPM SPACING SEE NOTE #1 ABOVE.                          |
| TYPE 2YI @ 20' O.C. | 4" YELLOW STRIPE CENTERLINE STRIPE FOR ARTERIALS DETAIL "E" |
- SKIP STRIPE PATTERN FOR CENTERLINES AND LANE LINES.**  
DETAIL "F"

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**PAVEMENT MARKING DETAILS**

DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/4"	01.03.10

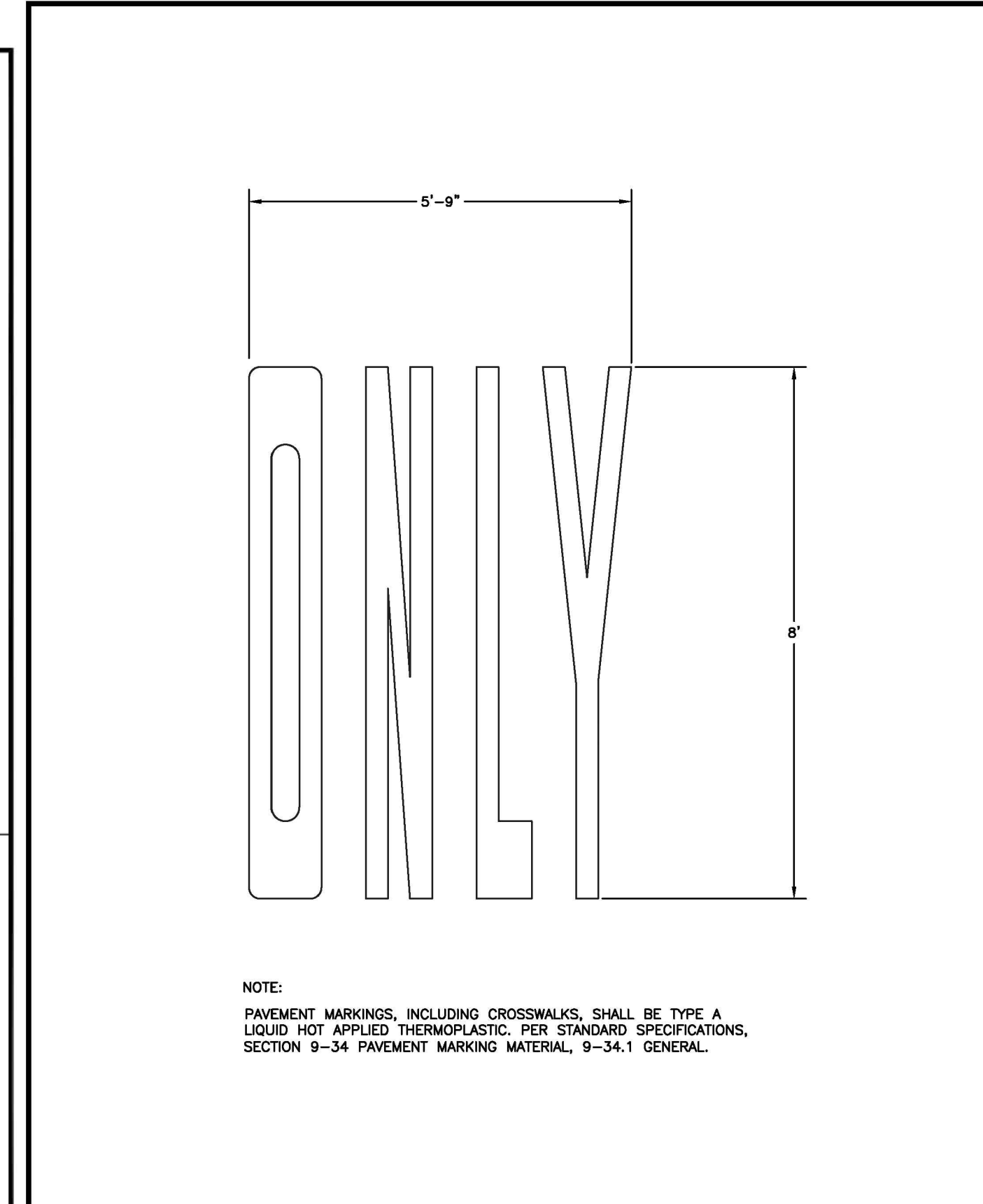


- KEY:**
- ① RR CROSSING SYMBOL
  - ② STOP BAR
  - ③ W10-1 ADVANCE WARNING SIGN
  - ④ SEE "STANDARD ALPHABETS FOR HIGHWAY SIGNS & PAVEMENT MARKINGS, 1977 METRIC EDITION" FOR LETTER LAYOUT.
- NOTE:**  
PAVEMENT MARKINGS SHALL BE HOT EXTRUDED THERMOPLASTIC 125 MIL THICKNESS, UNLESS OTHERWISE SPECIFIED.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**RR CROSSING SYMBOL DETAILS**

DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/4"	01.03.12

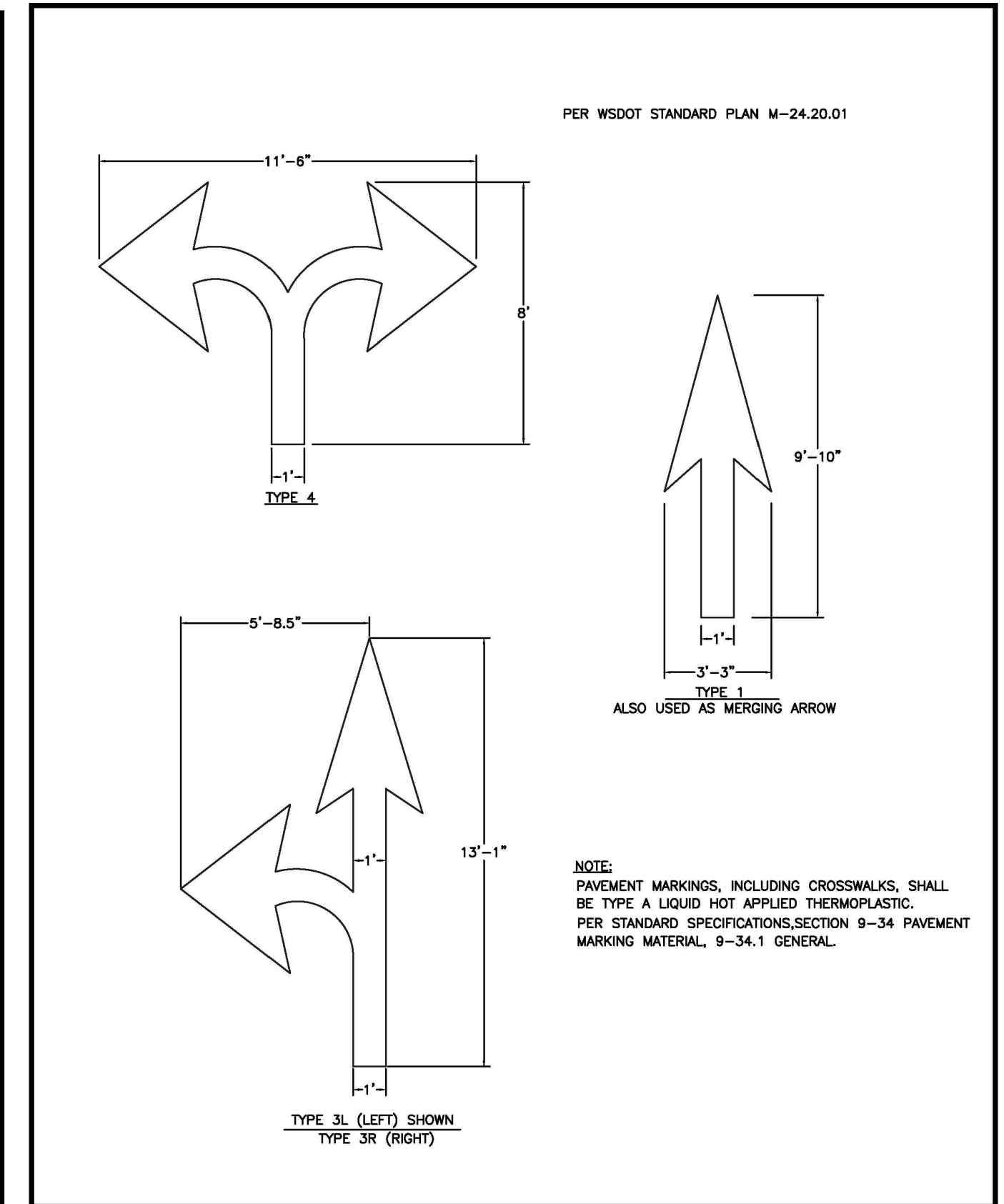


**NOTE:**  
PAVEMENT MARKINGS, INCLUDING CROSSWALKS, SHALL BE TYPE A LIQUID HOT APPLIED THERMOPLASTIC, PER STANDARD SPECIFICATIONS, SECTION 9-34 PAVEMENT MARKING MATERIAL, 9-34.1 GENERAL.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**PAVEMENT MARKER "ONLY"**

DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/2"	01.03.15



**NOTE:**  
PAVEMENT MARKINGS, INCLUDING CROSSWALKS, SHALL BE TYPE A LIQUID HOT APPLIED THERMOPLASTIC, PER STANDARD SPECIFICATIONS, SECTION 9-34 PAVEMENT MARKING MATERIAL, 9-34.1 GENERAL.

**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**PAVEMENT ARROWS**

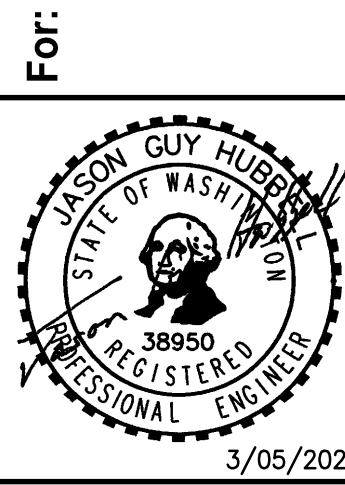
DESIGNED BY JIM ERWIN-SYBORODA	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN BARBER	REVISION BY LINDA LIAN	CITY STANDARD
FILE NAME P:\WORK\COMMENTS\CITY\202401\STR01.03.11	DATE APPROVED 09/12/2024	DATE REVISION 09/12/2024	SCALE 1/4"	01.03.14

2	03/05/24	DL	JSG	RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024
1	02/27/24	DL	JSG	BID SET
1	12/06/23	DL	JSG	RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Revision

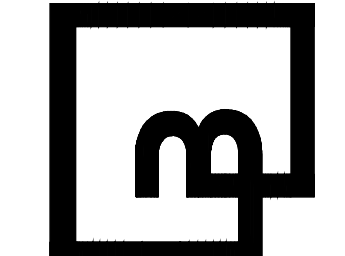
**CONSTRUCTION DETAILS**  
**FORTRESS - PUYALLUP**

**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:	Horizontal	NA	Vertical	N/A
Designed	DL	8/23/23	Checked	JGH
Drawn	RDC		Approved	JGH
Date		8/23/23		

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



**APPROVED**

BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

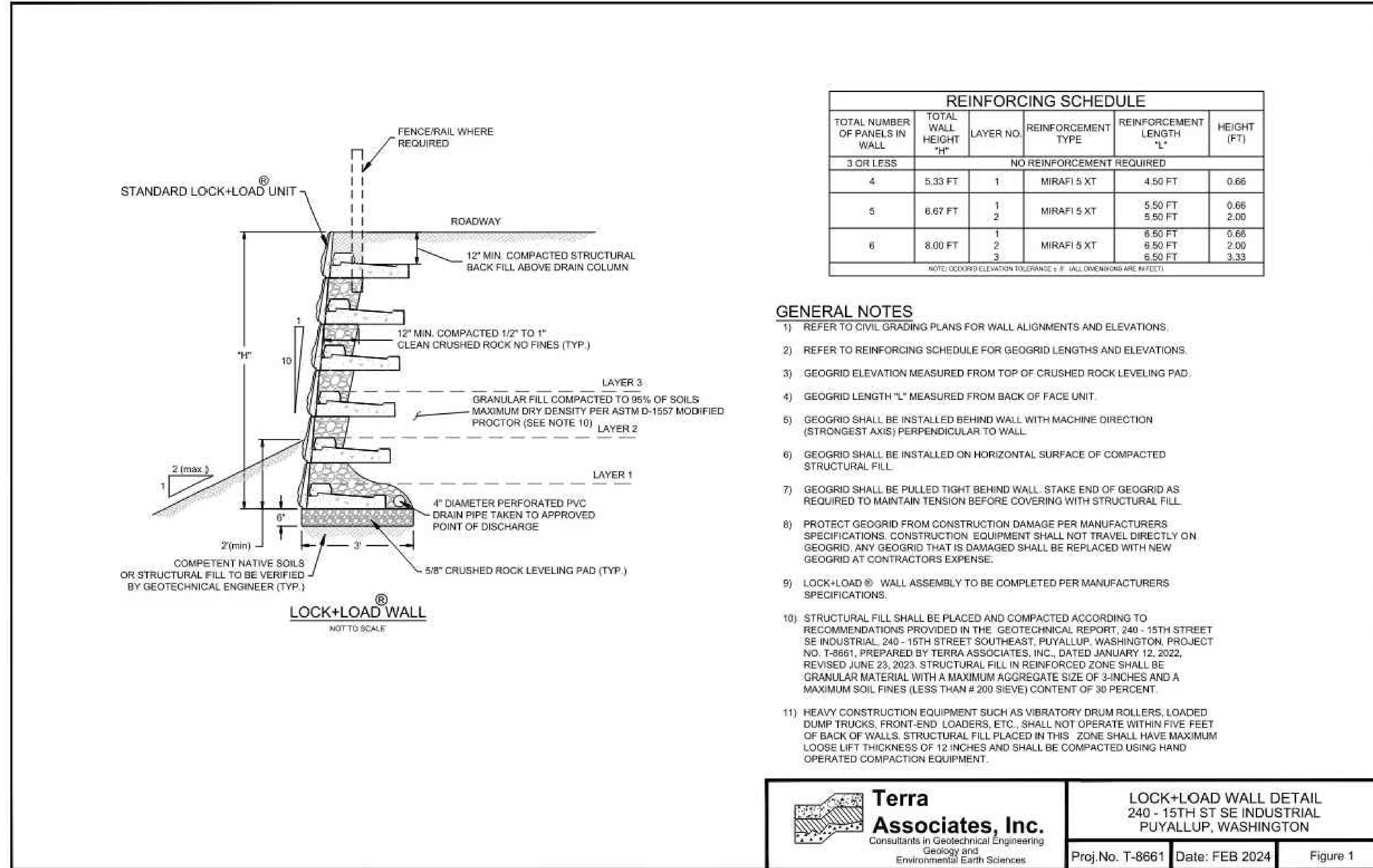
DATE \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

Job Number  
**22085**

Sheet  
**C30** of **34**

# CONSTRUCTION DETAILS



REINFORCING SCHEDULE					
TOTAL NUMBER OF PANELS IN WALL	TOTAL WALL HEIGHT "H"	LAYER NO.	REINFORCEMENT TYPE	REINFORCEMENT LENGTH "L"	HEIGHT (FT)
3 OR LESS NO REINFORCEMENT REQUIRED					
4	5.33 FT	1	MIRAFI 5 XT	4.50 FT	0.66
5	6.67 FT	1	MIRAFI 5 XT	5.50 FT	0.66
		2	MIRAFI 5 XT	5.50 FT	2.00
6	8.00 FT	1	MIRAFI 5 XT	6.50 FT	0.66
		3	MIRAFI 5 XT	6.50 FT	2.00
				6.50 FT	3.33

NOTE: GEOGRID ELEVATION TOLERANCE ± 8". WALL DIMENSIONS ARE IN FEET.

## GENERAL NOTES

- REFER TO CIVIL GRADING PLANS FOR WALL ALIGNMENTS AND ELEVATIONS.
- REFER TO REINFORCING SCHEDULE FOR GEOGRID LENGTHS AND ELEVATIONS.
- GEOGRID ELEVATION MEASURED FROM TOP OF CRUSHED ROCK LEVELING PAD.
- GEOGRID LENGTH "L" MEASURED FROM BACK OF FACE UNIT.
- GEOGRID SHALL BE INSTALLED BEHIND WALL WITH MACHINE DIRECTION (STRONGEST AXIS) PERPENDICULAR TO WALL.
- GEOGRID SHALL BE INSTALLED ON HORIZONTAL SURFACE OF COMPACTED STRUCTURAL FILL.
- GEOGRID SHALL BE PULLED TIGHT BEHIND WALL. STAKE END OF GEOGRID AS REQUIRED TO MAINTAIN TENSION BEFORE COVERING WITH STRUCTURAL FILL.
- PROTECT GEOGRID FROM CONSTRUCTION DAMAGE PER MANUFACTURERS SPECIFICATIONS. CONSTRUCTION EQUIPMENT SHALL NOT TRAVEL DIRECTLY ON GEOGRID. ANY GEOGRID THAT IS DAMAGED SHALL BE REPLACED WITH NEW GEOGRID AT CONTRACTORS EXPENSE.
- LOCK+LOAD® WALL ASSEMBLY TO BE COMPLETED PER MANUFACTURERS SPECIFICATIONS.
- STRUCTURAL FILL SHALL BE PLACED AND COMPACTED ACCORDING TO RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT, 240 - 15TH STREET SE INDUSTRIAL, 240 - 15TH STREET SOUTHEAST, PUYALLUP, WASHINGTON, PROJECT NO. T-8661, PREPARED BY TERRA ASSOCIATES, INC., DATED JANUARY 12, 2022, REVISED JUNE 23, 2023. STRUCTURAL FILL IN REINFORCED ZONE SHALL BE GRANULAR MATERIAL WITH A MAXIMUM AGGREGATE SIZE OF 3-INCHES AND A MAXIMUM SOIL FINES (LESS THAN # 200 SIEVE) CONTENT OF 30 PERCENT.
- HEAVY CONSTRUCTION EQUIPMENT SUCH AS VIBRATORY DRUM ROLLERS, LOADED DUMP TRUCKS, FRONT-END LOADERS, ETC., SHALL NOT OPERATE WITHIN FIVE FEET OF BACK OF WALLS. STRUCTURAL FILL PLACED IN THIS ZONE SHALL HAVE MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES AND SHALL BE COMPACTED USING HAND OPERATED COMPACTION EQUIPMENT.

**Terra Associates, Inc.**  
Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences

**LOCK+LOAD WALL DETAIL**  
240 - 15TH ST SE INDUSTRIAL  
PUYALLUP, WASHINGTON

Proj. No. T-8661 Date: FEB 2024 Figure 1

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	DL	JSG
		DL	DL	JSG
		DL	DL	JSG
1	12/06/23	DL	DL	JSG

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

Title:  
**CONSTRUCTION DETAILS**  
**FORTRESS - PUYALLUP**

For:  
**CREF3 PUYALLUP OWNER LLC**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Scale:  
Horizontal NA  
Vertical N/A

Designed: DL  
Drawn: ROC  
Checked: DL  
Approved: JGH  
Date: 6/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

APPROVED

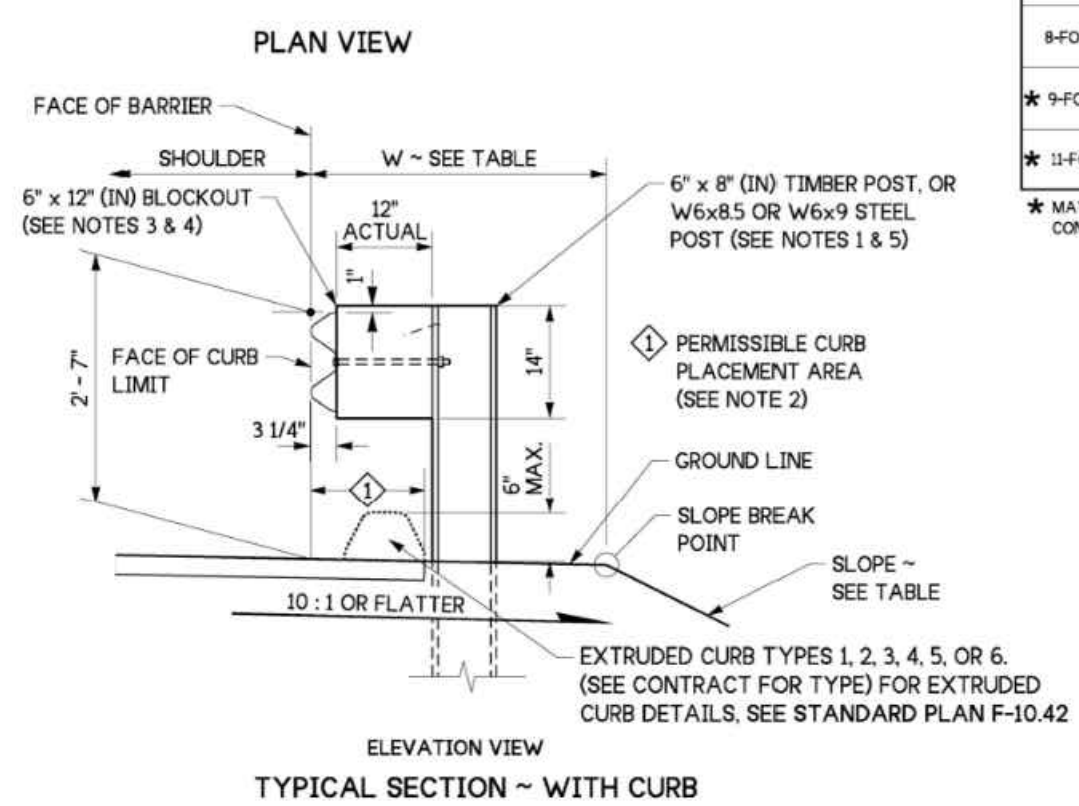
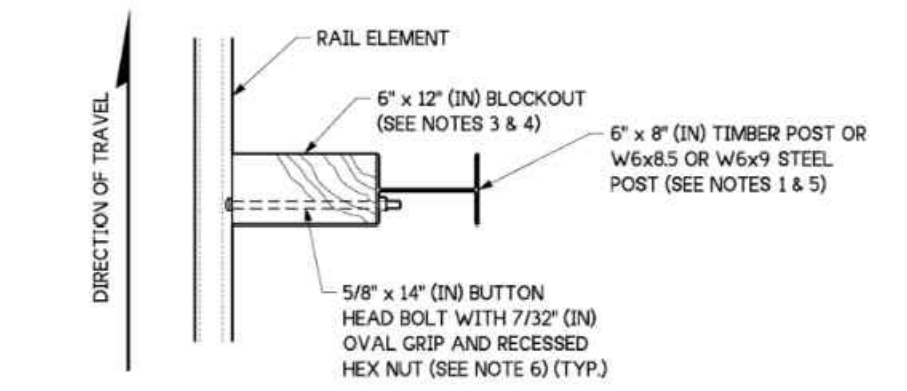
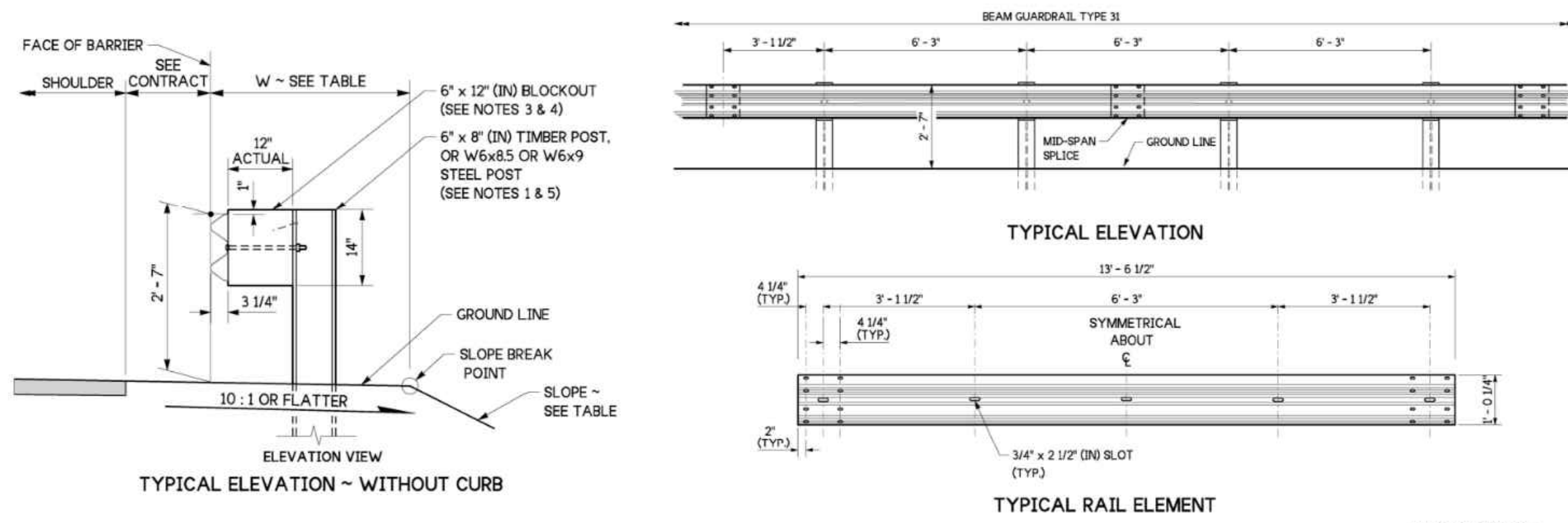
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.  
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

Job Number  
**22085**  
Sheet  
**C31** of **34**

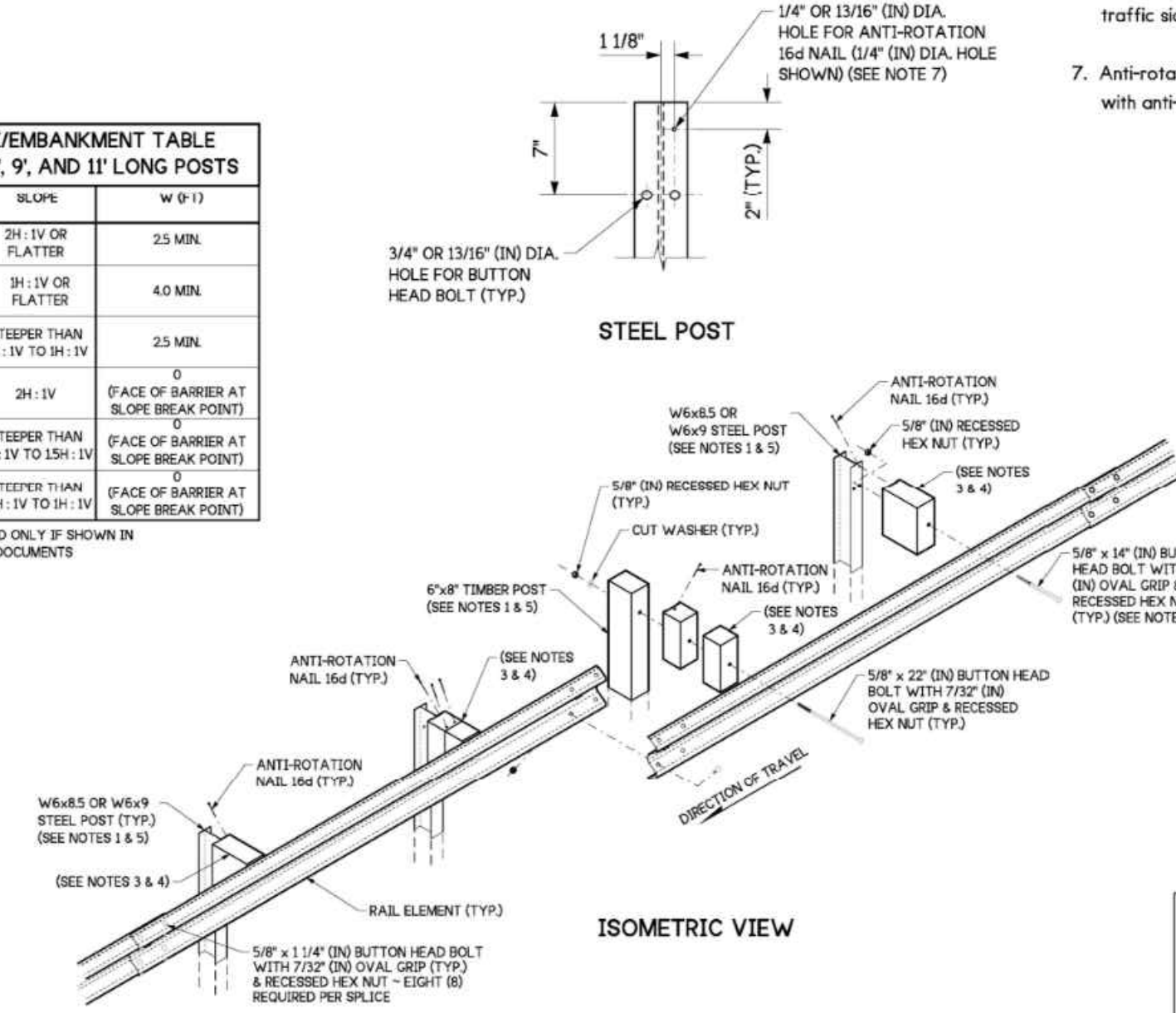
# CONSTRUCTION DETAILS



**SLOPE/EMBANKMENT TABLE FOR 6', 8', 9', AND 11' LONG POSTS**

POST LENGTH	SLOPE	W (FT)
6-FOOT	2H:1V OR FLATTER	2.5 MIN.
8-FOOT	2H:1V OR FLATTER	4.0 MIN.
9-FOOT	STEEPER THAN 2H:1V TO 3H:1V	2.5 MIN.
11-FOOT	STEEPER THAN 1.5H:1V TO 2H:1V	0
11-FOOT	STEEPER THAN 1.5H:1V TO 2H:1V	0

\* MAY BE USED ONLY IF SHOWN BY CONTRACT DOCUMENTS

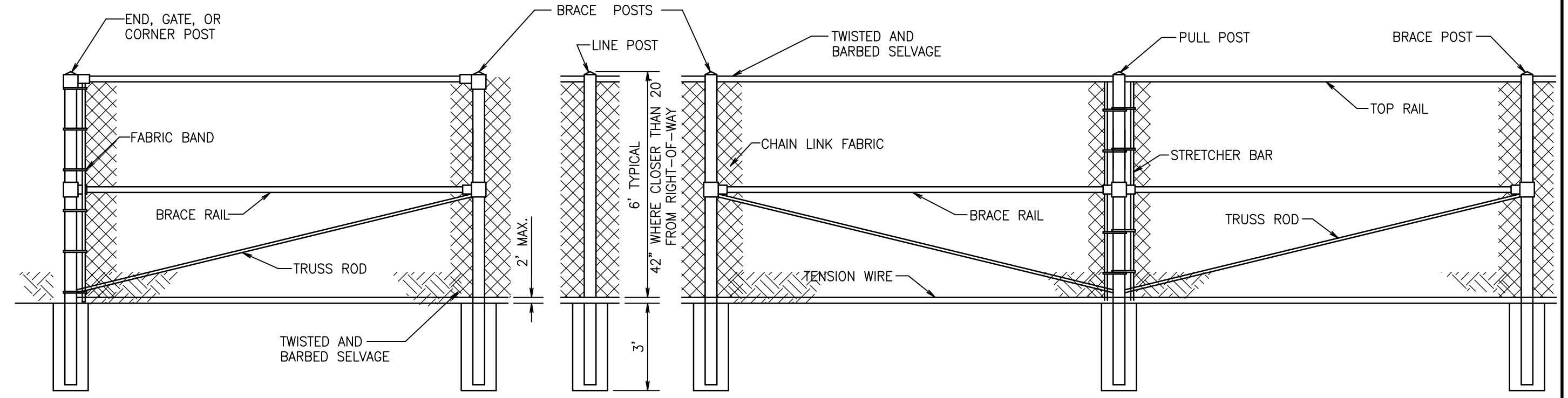


**NOTES**

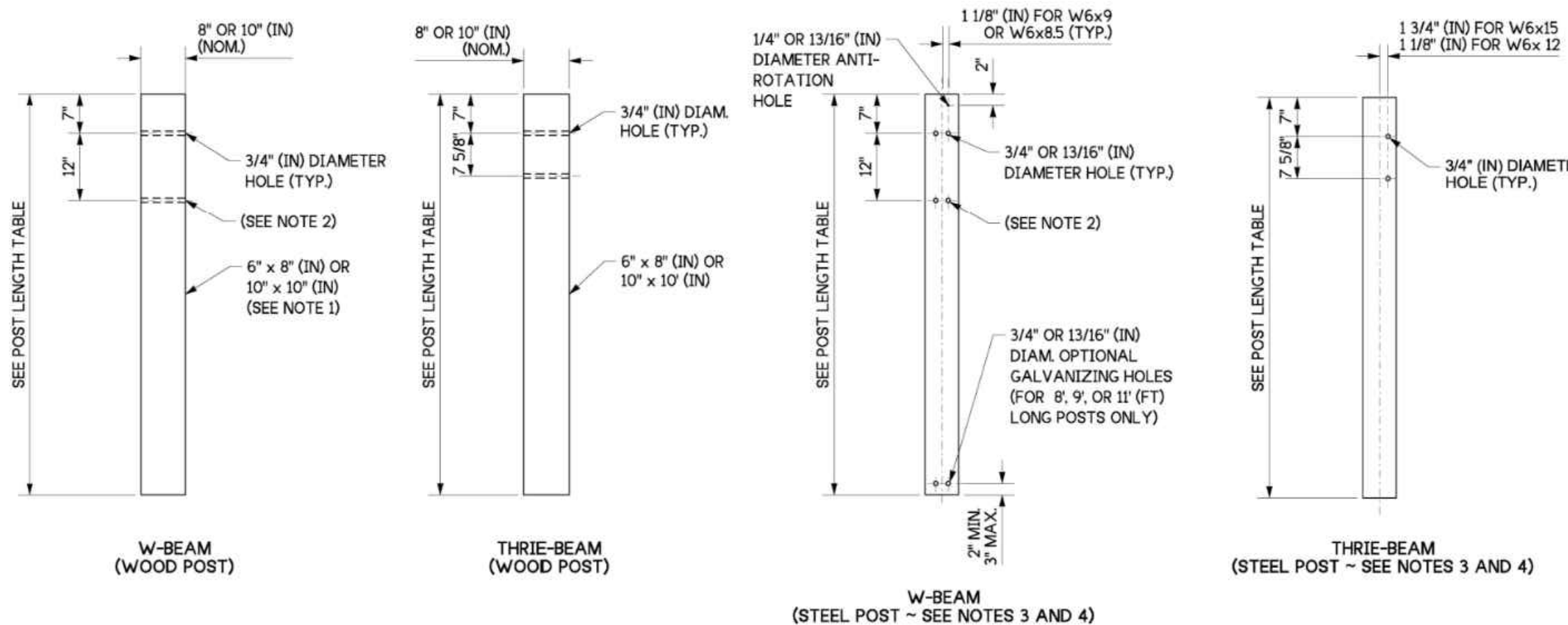
- Refer to Standard Plan C-1b for additional details not shown on this plan.
- Extend shoulder pavement to provide a base for the extruded curb. See Contract Plans for exceptions to distances shown.
- Use a single block or combination of blocks (no more than two (2)) to achieve the actual 12" (in) offset. See Standard Specification Section 9-16.3(2). Wood blocks shall be secured to the posts with anti-rotation nails. If combination blocks are used, the adjacent blocks shall be toenailed with two 15d galvanized nails to prevent block rotation.
- Wood blocks are shown. Blocks of an approved alternative material may be used. See Standard Specification Section 9-16.3(2).
- All posts for any standard barrier run shall be of the same type: timber or steel.
- Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
- Anti-rotation holes in steel posts are not required when using blocks with anti-rotation features (e.g. routed blocks).



**BEAM GUARDRAIL TYPE 31**  
STANDARD PLAN C-2010-09  
SHEET 1 OF 1 SHEET  
APPROVED FOR PUBLICATION  
Oct 12, 2023  
M. J. Moore  
STATE DESIGN ENGINEER  
Washington State Department of Transportation

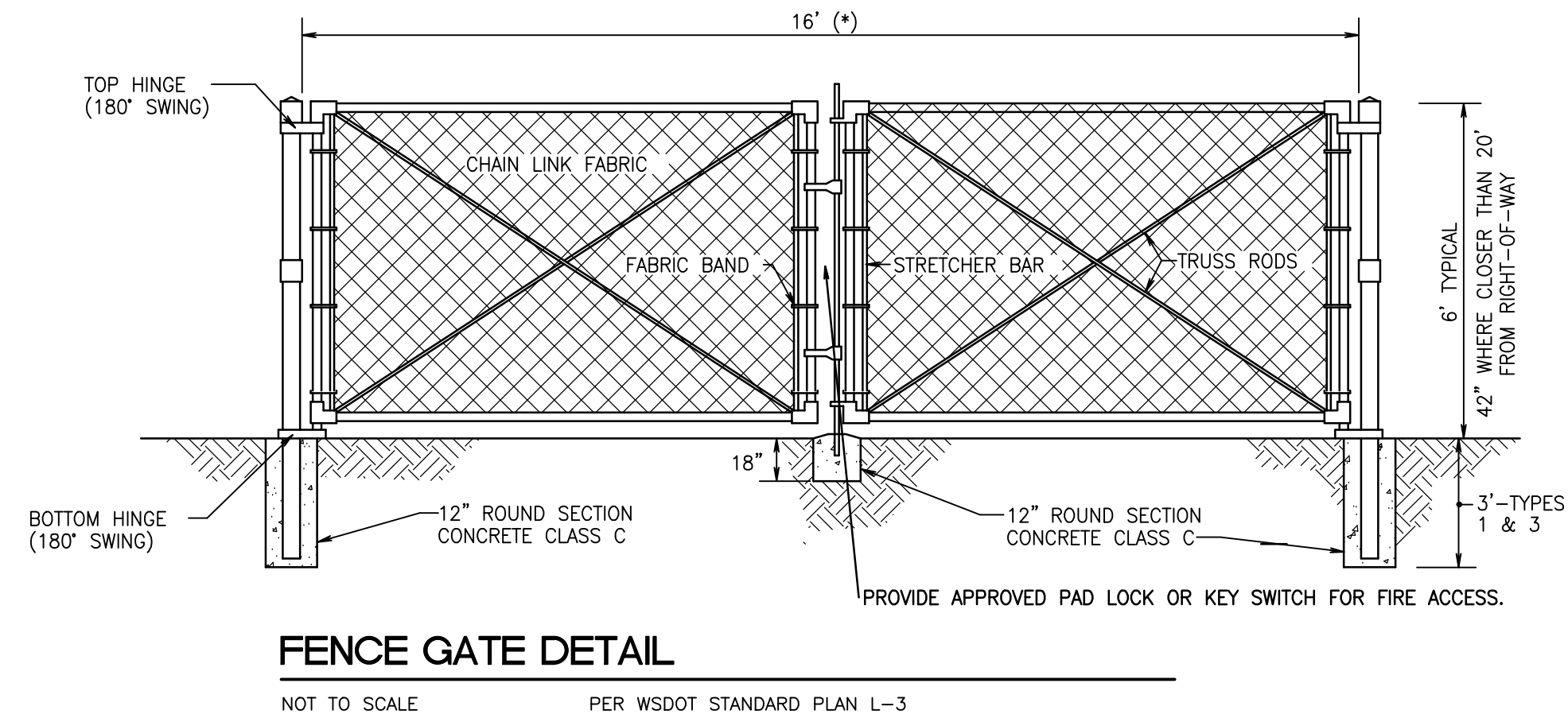


**BLACK VINYL COATED CHAIN LINK FENCE**  
NOT TO SCALE FENCE TO BE INSTALLED AROUND DETENTION POND AS NOTED ON SHEET C6.



**NOTES:**

- Wood posts for all guardrail placement plans shall be 6" x 8" (in) except where noted otherwise.
- Lower hole is for w-beam rub rail of Beam Guardrail Type 31 - Buried Terminal Type 2.
- W6x8.5 or W6x9 steel posts and timber blocks are alternates for 6x8 timber posts and blocks. W6x15 steel posts and timber blocks are alternates for 10" x 10" (in) timber posts and blocks.
- Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
- When "Beam Guardrail Type - \_ \_ Ft. Long Post" is specified in the contract, the post length shall be stamped with numbers, 1 1/2" min. high x 3/4" (in) wide at the location where the letter "H" is shown in the ASSEMBLY DETAIL. For wood post applications, the letter shall be stamped to a minimum depth of 1/4" (in). For steel post applications, the letter shall be legible after the post is galvanized. After post installation, it shall be the Contractor's responsibility to ensure the stamped numbers remain visible.



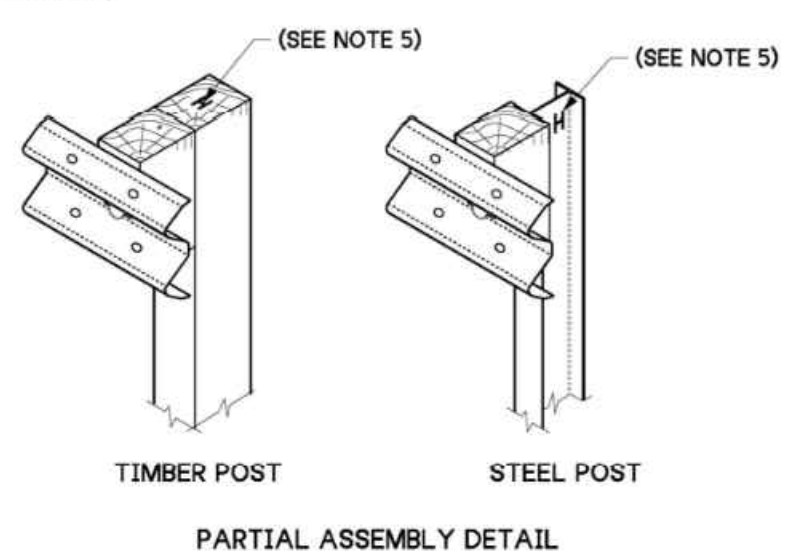
**FENCE GATE DETAIL**  
NOT TO SCALE PER WSDOT STANDARD PLAN L-3

**POST LENGTH TABLE**

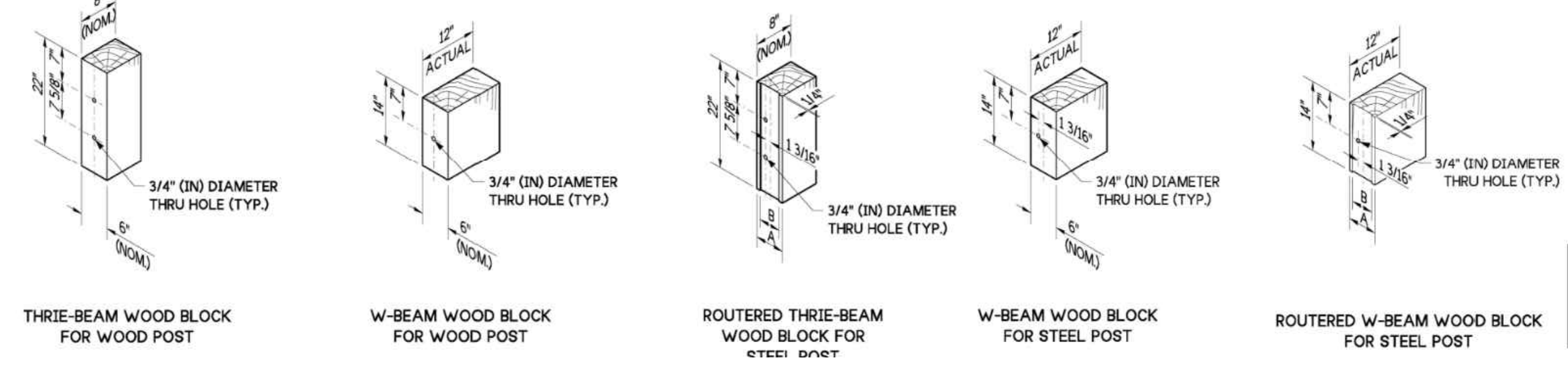
GUARDRAIL TYPE	LENGTH
TYPE 31	6' - 0"
	8' - 0" *
	9' - 0" *
	11' - 0" *
THRIE BEAM	VARIABLES **

**ROUTERED WOOD BLOCKS FOR STEEL POST TABLE**

POST	A	B
W6 x 8.5	6" NOMINAL	4 1/4"
W6 x 9	6" NOMINAL	4 1/4"
W6 x 12	6" NOMINAL	4 1/4"
W6 x 15	8" NOMINAL	6 1/4"



\* SEE CONTRACT FOR "BEAM GUARDRAIL TYPE - \_ \_ FT. LONG POST" LENGTHS. (SEE NOTE 5)  
\*\* SEE STANDARD PLANS FOR THRIE BEAM POST LENGTHS



**BEAM GUARDRAIL POSTS AND BLOCKS**  
STANDARD PLAN C-1b  
SHEET 1 OF 1 SHEET  
APPROVED FOR PUBLICATION  
Oct 12, 2023  
M. J. Moore  
STATE DESIGN ENGINEER  
Washington State Department of Transportation

**APPROVED**

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

**CONSTRUCTION DETAILS**  
**FORTRESS - PUYALLUP**

**FOR:** CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**FOR:** JASON GUY HUBBARD  
STATE OF WASHINGTON  
REGISTERED PROFESSIONAL ENGINEER  
NO. 38850  
3/05/2024

Scale: Horizontal NA Vertical N/A

Designed: \_\_\_\_\_  
Drawn: \_\_\_\_\_  
Checked: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Date: 8/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

Job Number: **22085**  
Sheet: **C32** of **34**

Revision

No.	Date	By	Appr.
2	03/05/24	DL	JSG
1	02/27/24	DL	JSG
	12/06/23	DL	JSG

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023



# CITY NOTES

## CITY OF PUYALLUP WATER SYSTEM NOTES:

- ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER, THE ENGINEERING SERVICES STAFF, AND THE FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR, PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
- BACTERIOLOGICAL (COLIFORM AND IRON BACTERIA) TEST SAMPLES WILL BE TAKEN BY THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) AND PAID FOR BY THE CONTRACTOR, EXCEPT FOR CAPITAL IMPROVEMENT PROJECTS (CIP) WHICH SHALL BE PAID FOR BY THE CITY.
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES FROM PAVED FINAL GRADE IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM OF 48 INCHES IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS. CITY OF PUYALLUP - CITY STANDARDS WATER REVISED 7/2023 300-8
- PIPE FOR WATER MAINS SHALL BE DUCTILE IRON CONFORMING TO SECTION 7-09 OF THE STANDARD SPECIFICATIONS, CLASS 52 WITH TYTON OR APPROVED EQUAL JOINTS. PIPE SHALL BE CEMENT LINED IN ACCORDANCE WITH A.S.A. SPECIFICATION A 21.4-1964.
- CONNECTIONS TO EXISTING WATER MAINS TYPICALLY SHALL BE WET TAPS THROUGH A TAPPING TEE AND TAPPING VALVE AND SHALL BE MADE BY A CITY APPROVED CONTRACTOR. THE TAPPING SLEEVE SHALL BE ROMAC SST ALL STAINLESS STEEL TAPPING SLEEVE OR APPROVED EQUAL. A TWO-PIECE EPOXY COATED OR DUCTILE IRON TAPPING SLEEVE MAY BE USED ON DUCTILE IRON PIPE WHEN THE TAP IS SMALLER THAN THE WATER MAIN SIZE I.E. 6-INCH TAP ON 8-INCH PIPE. THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) SHALL APPROVE THE TIME AND LOCATION FOR THESE CONNECTIONS.
- ALL WATER MAINS AND APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI IN ACCORDANCE WITH STANDARD SPECIFICATION 7-09.3(23). PRESSURE TESTING SHALL NOT BE PERFORMED UNTIL SATISFACTORY PURITY SAMPLES HAVE BEEN RECEIVED, EXCEPT WHEN NEW WATER MAINS ARE INSTALLED INDEPENDENTLY FROM THE WATER SYSTEM PIPING.
- FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAIL 03.05.01 AND AS DIRECTED BY THE CITY OF PUYALLUP FIRE CODE OFFICIAL.
- VALVE MARKER POSTS SHALL BE INSTALLED WHERE VALVE BOXES ARE HIDDEN FROM VIEW OR IN UNPAVED THE INSTALLATION SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL 03.01.02.
- RESILIENT SEATED WEDGE GATE VALVES SHALL BE USED FOR 10-INCH MAINS AND SMALLER. BUTTERFLY VALVES SHALL BE USED FOR MAINS GREATER THAN 10 INCHES.
- PIPE FITTING FOR WATER MAINS SHALL BE DUCTILE IRON AND SHALL BE MECHANICAL JOINT CONFORMING TO AWWA SPECIFICATION C111-72.
- WATER MAIN PIPE AND SERVICE CONNECTIONS SHALL BE A MINIMUM OF 10 FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES.
- WHERE A WATER MAIN CROSSES THE NORTHWEST GAS PIPELINE, THE WATER LINE SHALL BE CASED WITH PVC PIPE A MINIMUM OF 10 FEET BEYOND EACH SIDE OF THE GAS LINE EASEMENT. CONTACT WILLIAMS NORTHWEST PIPELINE BEFORE THE CROSSING IS MADE.
- TRENCHING, BEDDING, AND BACKFILL FOR WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAIL 06.01.01.
- ALL COMMERCIAL AND INDUSTRIAL DEVELOPMENTS, IRRIGATION SYSTEMS, AND MULTI-FAMILY WATER SERVICE CONNECTIONS SHALL BE PROTECTED BY A DOUBLE CHECK VALVE ASSEMBLY OR A REDUCED PRESSURE BACKFLOW ASSEMBLY AS DIRECTED BY THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) CONFORMING TO CITY STANDARD DETAILS 03.04.01, 03.04.02, AND 03.04.03.
- ANY LEAD JOINT FITTING DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH A MECHANICAL JOINT FITTING AT THE CONTRACTOR'S EXPENSE.
- HYDRAULIC FLOW MODELING SHALL BE REQUIRED FOR FORMAL PLANS WITHIN OR TO BE ANNEXED INTO THE CITY OF PUYALLUP'S WATER SERVICE AREA. THE DEVELOPER SHALL BE RESPONSIBLE TO APPLY FOR A HYDRAULIC MODEL PERMIT PRIOR TO PLAT REVIEW. THE HYDRAULIC MODELING CRITERIA IS BASED ON THE PROJECTED WATER DEMAND WHILE MAINTAINING A MINIMUM SYSTEM PRESSURE OF 20 POUNDS PER SQUARE INCH (PSI) AND A MAXIMUM VELOCITY OF 10 FEET PER SECOND.
- WHEN USING A FIRE HYDRANT FOR NON-FIREFIGHTING PURPOSES, A CITY HYDRANT METER MUST BE USED. COORDINATE THE ACQUISITION OF THE HYDRANT METER WITH THE CITY'S UTILITY BILLING DIVISION AT PUYALLUP CITY HALL. A CITY APPROVED BACKFLOW PROTECTION ASSEMBLY SHALL BE INSTALLED BY THE PERSON REQUESTING USE OF A FIRE HYDRANT. THE ASSEMBLY SHALL BE ACCOMPANIED BY A CURRENT BACKFLOW ASSEMBLY TEST REPORT. THE TEST REPORT SHALL BE AVAILABLE AT THE SITE FOR THE DURATION OF THE HYDRANT USE.
- SHOULD A BREAK OCCUR ON ANY CITY WATER MAIN, THE CONTRACTOR SHALL FOLLOW THE CITY'S ADOPTED "WATER MAIN BREAK PROCEDURE" ISSUED TO THEM AT THE PRE-CONSTRUCTION MEETING AND NOTIFY THOSE CONNECTED TO THE SYSTEM IN THE IMPACTED AREA AS OUTLINED IN THE PROCEDURE.
- WATER MAIN REPAIRS (REFERENCES: AWWA C651-14 AND WSDOT STANDARD SPECIFICATION SECTION 7-09) (NOTE: A PLANNED WATER MAIN REPAIR SHALL BE APPROVED BY THE CITY INSPECTOR AND/OR WATER DIVISION SUPERVISOR PRIOR TO COMMENCING WORK).
  - REPAIR WITHOUT DEPRESSURIZATION - SMALL LEAKS SHALL BE REPAIRED USING REPAIR BANDS WHILE MAINTAINING POSITIVE PRESSURE IN THE WATER MAIN. VALVES SURROUNDING THE LEAK WILL BE PARTIALLY SHUT BY THE CITY WATER DEPARTMENT TO REDUCE THE FLOW AND PRESSURE TO THE AREA. BLOWOFFS AND HYDRANTS IN THE REDUCED PRESSURE AREA MAY BE OPENED AS NEEDED TO FURTHER REDUCE THE PRESSURE. THE WATER MAIN TRENCH SHALL BE OVER-EXCAVATED TO ALLOW WATER IN THE TRENCH TO BE PUMPED OUT AND MAINTAINED BELOW THE LEVEL OF THE WATER MAIN. THE REPAIR SHALL BE COMPLETED WITH THE WATER MAIN PRESSURE REMAINING POSITIVE. AFTER THE REPAIR IS MADE, THE SYSTEM SHALL BE FULLY PRESSURIZED AND A VISUAL LEAK INSPECTION WILL BE COMPLETED. THE WATER MAIN IN THE AFFECTED AREA SHALL BE FLUSHED TO ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOFF).
  - REPAIR/CUT-IN WITH DEPRESSURIZATION - TRENCH SHALL BE OVER EXCAVATED AND DEWATERED BELOW THE WATER MAIN. FLUSH WATER FROM PIPE FROM EACH DIRECTION UNTIL IT RUNS CLEAR. IMMEDIATELY PRIOR TO INSTALLATION OF A NEW PIPE SECTION FOR REPAIR OR CUT IN TEE, ALL NEW FITTINGS AND PIPE SPOOLS SHALL BE SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION (MINIMUM). THE INTERIOR OF THE EXISTING PIPE SHALL BE SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION AT LEAST 6 FEET IN EACH DIRECTION FROM EXPOSED CUT ENDS. THE WATER MAIN IN THE AFFECTED AREA SHALL BE FLUSHED TO ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM THE VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOFF). CUSTOMERS SHALL BE NOTIFIED AFTER THE WATER MAIN IS FLUSHED AND REPAIRS HAVE BEEN COMPLETED, AS OUTLINED IN THE "WATER MAIN BREAK PROCEDURE."
- NEW WATER MAIN INSTALLATION:
  - EACH NEW WATER MAIN SECTION SHALL BE DELIVERED, STACKED AND STORED ON-SITE WITH ENDS PLUGGED. THE PLUGS SHALL REMAIN IN THE PIPE UNTIL EACH PARTICULAR SECTION IS INSTALLED. NATIONAL SANITATION FOUNDATION (NSF) APPROVED SIXTY-FIVE PERCENT (65%) CALCIUM HYPOCHLORITE SHALL BE ADDED TO THE UPSTREAM END OF EACH PIPE SECTION, AND AT EACH HYDRANT TEE IN THE AMOUNT GIVEN IN THE TABLE BELOW (OR PER APPROVED MANUFACTURER SPECIFICATIONS), THE MINIMUM AMOUNT OF CALCIUM HYPOCHLORITE ADDED SHOULD BE SUFFICIENT TO ACHIEVE A 50 MG/L CONCENTRATION WITHIN THE IMPACTED AREA.

## CITY OF PUYALLUP STORMWATER NOTES:

- ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253)841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE ENGINEERING SERVICES STAFF PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
- ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT, SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
- DURING CONSTRUCTION, ALL EXISTING AND NEWLY INSTALLED DRAINAGE STRUCTURES SHALL BE PROTECTED FROM SEDIMENTS.
- ALL STORM MANHOLES SHALL CONFORM TO CITY STANDARD DETAIL NO. 02.01.01. FLOW CONTROL MANHOLE/OIL WATER SEPARATOR SHALL CONFORM TO CITY STANDARD DETAIL NO. 02.01.06 AND 02.01.07. MANHOLE RING AND COVER SHALL CONFORM TO CITY STANDARD DETAIL 06.01.02.
- CATCH BASINS TYPE 1 SHALL CONFORM TO CITY STANDARD DETAIL NO.02.01.02 AND 02.01.03 AND SHALL BE USED ONLY FOR DEPTHS LESS THAN 5 FEET FROM TOP OF THE GRATE TO THE INVERT OF THE STORM PIPE.
- CATCH BASINS TYPE II SHALL CONFORM TO CITY STANDARD DETAIL NO.02.01.04 AND SHALL BE USED FOR DEPTHS GREATER THAN 5 FEET FROM TOP OF THE GRATE TO THE INVERT OF THE STORM PIPE. CITY OF PUYALLUP - CITY STANDARDS STORM REVISED 07/2023 200-21
- CAST IRON OR DUCTILE IRON FRAME AND GRATE SHALL CONFORM TO CITY STANDARD DETAIL NO.02.01.05. GRATE SHALL BE MARKED WITH "DRAINS TO STREAM". SOLID CATCH BASIN LIDS (SQUARE UNLESS NOTED AS SHALL CONFORM TO WSDOT STANDARD PLAN B-30.20-04 (OLYMPIC FOUNDRY NO. SM60 OR EQUAL), VANE GRATES SHALL CONFORM TO WSDOT STANDARD PLAN B-30.30-03 (OLYMPIC FOUNDRY NO. SM60 OR EQUAL).
- STORMWATER PIPES SHALL BE ONLY PVC, CONCRETE, DUCTILE IRON, OR DUAL WALLED POLYPROPYLENE PIPE.
  - THE USE OF ANY OTHER TYPE SHALL BE REVIEWED AND APPROVED BY THE ENGINEERING SERVICES STAFF PRIOR TO INSTALLATION.
  - PVC PIPE SHALL BE PER ASTM D3034, SDR 35 FOR PIPE SIZE 15-INCH AND SMALLER AND F679 FOR PIPE SIZES 18 TO 27 INCH. MINIMUM COVER ON PVC PIPE SHALL BE 3.0 FEET.
  - CONCRETE PIPE SHALL CONFORM TO THE WSDOT STANDARD SPECIFICATIONS FOR CONCRETE UNDERDRAIN PIPE. MINIMUM COVER ON CONCRETE PIPE SHALL NOT LESS THAN 3.0 FEET.
  - DUCTILE IRON PIPE SHALL BE CLASS 50, CONFORMING TO AWWA C151. MINIMUM COVER ON DUCTILE IRON PIPE SHALL BE 1.0 FOOT.
  - POLYPROPYLENE PIPE (PP) SHALL BE DUAL WALLED, HAVE A SMOOTH INTERIOR AND EXTERIOR CORRUGATIONS AND MEET WSDOT 9-05.24(1). 12-INCH THROUGH 30-INCH PIPE SHALL MEET OR EXCEED ASTM F2736 AND AASHTO M330, TYPE S, OR TYPE D. 36-INCH THROUGH 60-INCH PIPE SHALL MEET OR EXCEED ASTM F2881 AND AASHTO M330, TYPE S, OR TYPE D. TESTING SHALL BE PER ASTM F1417. MINIMUM COVER OVER POLYPROPYLENE PIPE SHALL BE 3-FEET.
- TRENCHING, BEDDING, AND BACKFILL FOR PIPE SHALL CONFORM TO CITY STANDARD DETAIL NO. 06.01.01.
- STORM PIPE SHALL BE A MINIMUM OF 10 FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES.
- ALL STORM DRAIN MAINS SHALL BE TESTED AND INSPECTED FOR ACCEPTANCE AS OUTLINED IN SECTION 406 OF THE CITY OF PUYALLUP SANITARY SEWER SYSTEM STANDARDS.
- ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES, AND PROTECTIVE MEASURES FOR CRITICAL AREAS AND SIGNIFICANT TREES SHALL BE INSTALLED PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES

## ROADWAY NOTES:

- ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE ENGINEERING SERVICES STAFF PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
- ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT, SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
- MONUMENTS SHALL BE INSTALLED AT ALL STREET INTERSECTIONS, AT ANGLE POINTS, AND POINTS OF CURVATURE IN EACH STREET. ALL BOUNDARY MONUMENTS MUST BE INSTALLED ACCORDING TO THE WASHINGTON STATE SUBDIVISION LAWS.
- CURB AND GUTTER INSTALLATION SHALL CONFORM TO CITY STANDARD DETAIL 01.02.09.
- SIDEWALKS AND DRIVEWAYS SHALL BE INSTALLED AS LOTS ARE DETAIL ON. SIDEWALKS AND DRIVEWAYS SHALL CONFORM TO CITY STANDARD DETAIL 01.02.01, 01.02.02 AND 01.02.12. IF ASPHALT IS DAMAGED DURING REPLACEMENT OF CURB AND GUTTER, THE REPAIR SHALL CONFORM TO CITY STANDARD DETAIL 01.02.10.
- THE SURROUNDING GROUND (5 FEET BEYOND THE BASE) FOR ALL POWER TRANSFORMERS, TELEPHONE/TV PEDESTALS, AND STREET LIGHT MAIN DISCONNECTS SHALL BE GRADED TO A POSITIVE 2 PERCENT SLOPE FROM TOP OF CURB.
- SIGNAGE AND TRAFFIC CONTROL DEVICES ARE SAFETY ITEMS AND SHALL BE INSTALLED PRIOR TO ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY OR PLAT APPROVAL. HOWEVER, IN LARGER DEVELOPMENTS, EXACT LOCATIONS OF STOP AND YIELD SIGNS MAY NEED TO BE DETERMINED AFTER FULL BUILDOUT WHEN TRAFFIC PATTERNS HAVE BEEN ESTABLISHED. IN THIS CASE, CONTRACTOR SHALL PROVIDE INDICATED "CITY-PLACED" SIGNS, SIGNPOSTS, AND BRACKETS TO THE CITY SIGN SPECIALIST (253) 841-5471 FOR LATER INSTALLATION BY THE CITY. ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PRIOR TO ANY SIGN OR STRIPING INSTALLATION OR REMOVAL THE CONTRACTOR SHALL CONTACT THE CITY SIGN SPECIALIST (253) 841-5471 TO ARRANGE FOR AN ON-SITE MEETING TO DISCUSS PLACEMENT AND UNIFORMITY.
- NEW OR REVISED STOP SIGNS OR YIELD SIGNS SHALL BE ADVANCE WARNED USING THE PROCEDURE OUTLINED IN THE MUTCD. ADVANCE WARNING SIGNS AND FLAGS SHALL BE MAINTAINED BY INSTALLER FOR 30 DAYS AND THEN REMOVED.

## CITY OF PUYALLUP SANITARY SEWER NOTES:

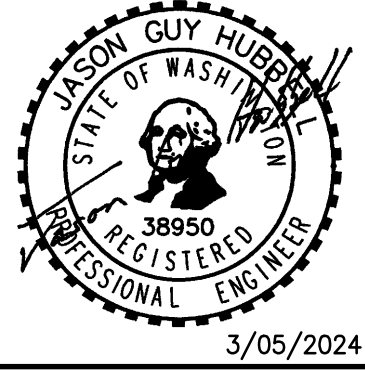
- ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE SEWER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE ENGINEERING SERVICES STAFF PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THE GROUND PRIOR TO ANY CONSTRUCTION, CALL AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
- ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
- MINIMUM GRADE ON ALL 4 INCH RESIDENTIAL SIDE SEWERS SHALL BE 2 PERCENT AND 6 INCH COMMERCIAL SIDE SEWERS SHALL BE 1 PERCENT. MAXIMUM SHALL BE 8 PERCENT. ALL SIDE SEWERS SHALL BE 6 INCHES WITHIN CITY RIGHT-OF-WAY.
- SIDE SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD NOS. 04.03.01, 04.03.02, 04.03.03 AND 04.03.04. SIDE SEWER INSTALLATION WORK SHALL BE DONE IN ACCORDANCE WITH THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT (WSHA).
- ALL SEWER PIPE SHALL BE PVC, POLYPROPYLENE, OR DUCTILE IRON. PVC SEWER PIPE SHALL CONFORM TO ASTM D-3034, SDR35 FOR PIPE SIZES 15-INCH AND SMALLER AND ASTM F679 FOR PIPE SIZES 18 TO 27-INCH. DUCTILE IRON PIPE SHALL BE CLASS 51 OR GREATER, LINED WITH PROTECO 401TM CITY OF PUYALLUP - CITY STANDARDS SANITARY SEWER REVISED 03/2020 400-8 EPOXY LINING OR EQUIVALENT UNLESS OTHERWISE NOTED. 12-INCH THROUGH 30-INCH POLYPROPYLENE PIPE (PP) SHALL BE DUAL WALLED, HAVE A SMOOTH INTERIOR AND EXTERIOR CORRUGATIONS AND MEET WSDOT 9-05.24(2). IT SHALL MEET OR EXCEED ASTM F2764. 36-INCH THROUGH 60-INCH PP PIPE SHALL BE TRIPLE WALLED AND MEET WSDOT 9-05.24(2). IT SHALL MEET OR EXCEED ASTM F2764. PP SHALL HAVE A MINIMUM PIPE STIFFNESS OF 46 PI WHEN TESTED IN ACCORDANCE WITH ASTM D2412. TESTING SHALL BE PER ASTM F1417. TRENCHING, BEDDING, AND BACKFILL SHALL BE IN ACCORDANCE WITH CITY 3.0 FEET. MINIMUM COVER ON DUCTILE IRON PIPE SHALL BE 1.0 FOOT.
- SANITARY SEWER MANHOLE FRAMES AND COVERS SHALL CONFORM TO CITY STANDARD NO. 06.01.02.
- SANITARY SEWER MANHOLES SHALL CONFORM TO CITY STANDARD NOS. 04.01.01, 04.01.02, 04.01.03 AND 04.01.04. ALL MANHOLES SHALL BE CHANNLEED FOR FUTURE LINES AS SPECIFIED ON THESE PLANS. MANHOLE STEPS AND LADDER SHALL CONFORM TO STANDARD NO. 06.01.03.
- SANITARY SEWER PIPE AND SIDE SEWERS SHALL BE 10 FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES WITH THE EXCEPTION OF SIDE SEWERS THAT PROVIDE SERVICE TO A SINGLE-FAMILY RESIDENCE. AT THE DISCRETION OF THE REVIEW ENGINEER, A LICENSED PROFESSIONAL ENGINEER WILL BE REQUIRED TO STAMP THE DESIGN TO ACCOUNT FOR DEPTH OR PROXIMITY TO FOUNDATION, STEEP SLOPES, OR OTHER FACTORS.
- NO SIDE SEWERS SHALL BE CONNECTED TO ANY HOUSE OR BUILDING UNTIL ALL MANHOLES ARE ADJUSTED TO THE FINISHED GRADE OF THE COMPLETED ASPHALT ROADWAY AND THE ASPHALT PATCH AND SEAL AROUND THE RING ARE ACCEPTED.
- FOR COMMERCIAL DEVELOPMENTS IN WHICH SOURCES OF GREASE AND/OR OILS MAY BE INTRODUCED TO THE CITY SANITARY SEWER SYSTEM, A CITY APPROVED GREASE INTERCEPTOR SHALL BE INSTALLED DOWNSTREAM FROM THE SOURCE.
- ONCE SEWER AND ALL OTHER UTILITY CONSTRUCTION IS COMPLETED, ALL SANITARY SEWER MAINS AND SIDE SEWERS SHALL BE TESTED PER SECTION 406 OF THE CITY STANDARDS

## GRADING, EROSION AND SEDIMENT CONTROL NOTES:

- ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE MEETING.
- AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY ENGINEER PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS HOURS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
- ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
- ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ONSITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.
- THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SITUATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
- APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.
- ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITTEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.
- IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.
- NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.

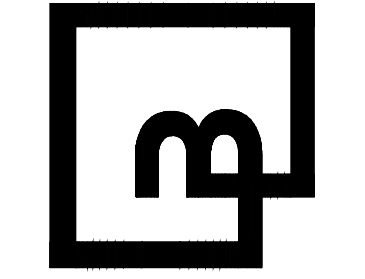
Revision  
No. Date By Cktd. Appr.  
2 03/05/24 DL JSG  
02/27/24 DL JSG  
1 12/06/23 DL JSG  
RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

For:  
**CREFF3 PUYALLUP OWNER LLC**  
**11611 SAN VICENTE BLVD**  
**10TH FLOOR**  
**LOS ANGELES, CA 90049**



Scale:	Horizontal
Vertical	N/A
Designed	DL
Drawn	RDC
Checked	DL
Approved	JGH
Date	6/23/23

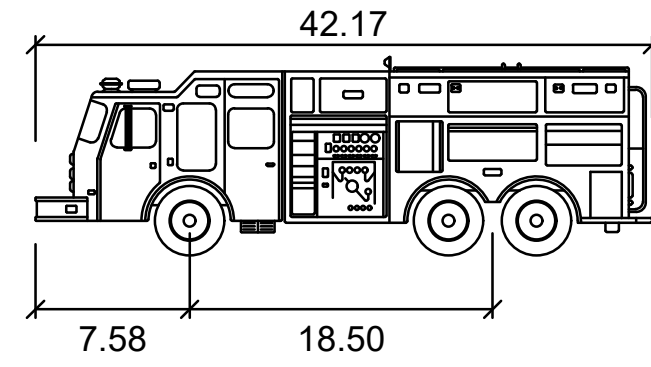
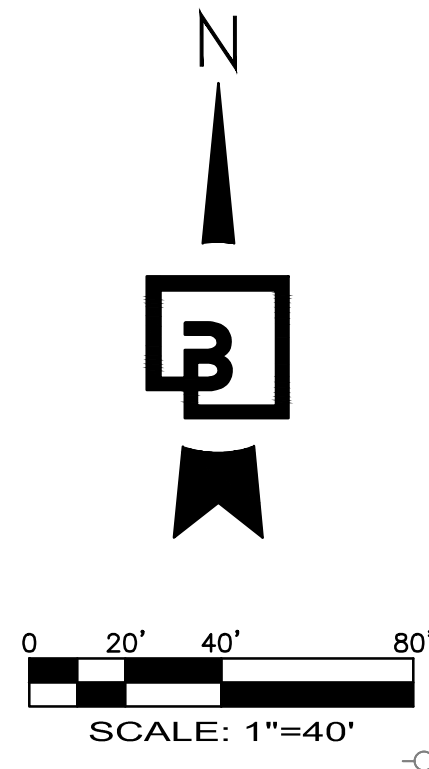
**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



Job Number: **22085**  
Sheet: **C33** of **34**

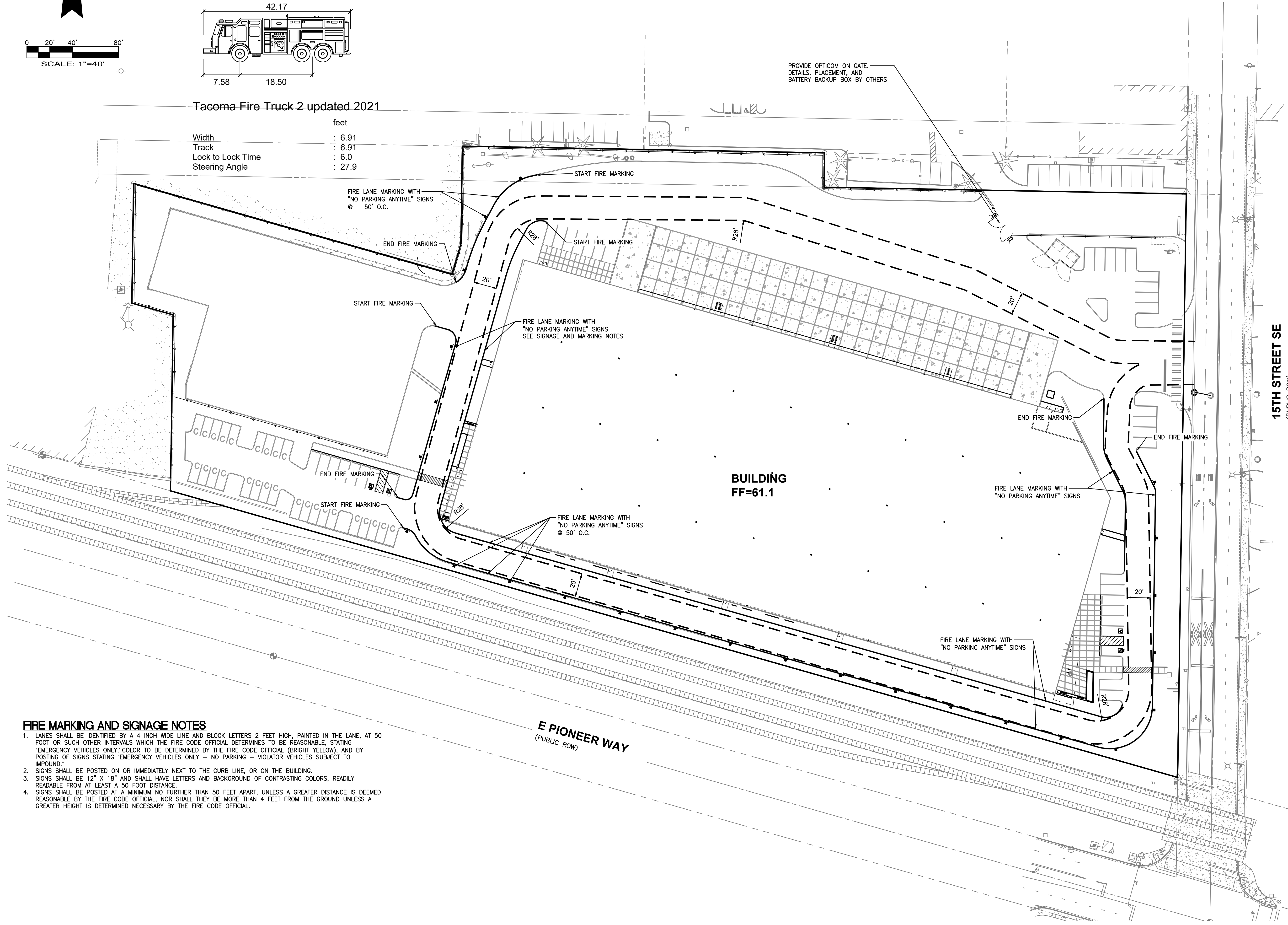
APPROVED  
By: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

# FIRE LANE MARKING PLAN



Tacoma Fire Truck 2 updated 2021

	feet
Width	: 6.91
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 27.9



**BUILDING  
FF=61.1**

**E PIONEER WAY  
(PUBLIC ROW)**

**15TH STREET SE  
(PUBLIC ROW)**

**FIRE MARKING AND SIGNAGE NOTES**

- LANES SHALL BE IDENTIFIED BY A 4 INCH WIDE LINE AND BLOCK LETTERS 2 FEET HIGH, PAINTED IN THE LANE, AT 50 FOOT OR SUCH OTHER INTERVALS WHICH THE FIRE CODE OFFICIAL DETERMINES TO BE REASONABLE, STATING "EMERGENCY VEHICLES ONLY"; COLOR TO BE DETERMINED BY THE FIRE CODE OFFICIAL (BRIGHT YELLOW), AND BY POSTING OF SIGNS STATING "EMERGENCY VEHICLES ONLY - NO PARKING - VIOLATOR VEHICLES SUBJECT TO IMPOUND."
- SIGNS SHALL BE POSTED ON OR IMMEDIATELY NEXT TO THE CURB LINE, OR ON THE BUILDING.
- SIGNS SHALL BE 12" X 18" AND SHALL HAVE LETTERS AND BACKGROUND OF CONTRASTING COLORS, READILY READABLE FROM AT LEAST A 50 FOOT DISTANCE.
- SIGNS SHALL BE POSTED AT A MINIMUM NO FURTHER THAN 50 FEET APART, UNLESS A GREATER DISTANCE IS DEEMED REASONABLE BY THE FIRE CODE OFFICIAL, NOR SHALL THEY BE MORE THAN 4 FEET FROM THE GROUND UNLESS A GREATER HEIGHT IS DETERMINED NECESSARY BY THE FIRE CODE OFFICIAL.



Know what's below.  
Call before you dig.

**APPROVED**

BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

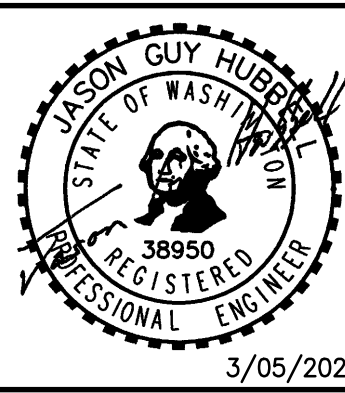
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

No.	Date	By	Chk.	Appr.
2	03/05/24	DL	JSG	JSG
		DL	JSG	JSG
		DL	JSG	JSG
1	12/06/23	DL	JSG	JSG

RESPONSE TO CITY COMMENTS, DATED FEBRUARY 06, 2024  
BID SET  
RESPONSE TO CITY COMMENTS, DATED 10-06-2023

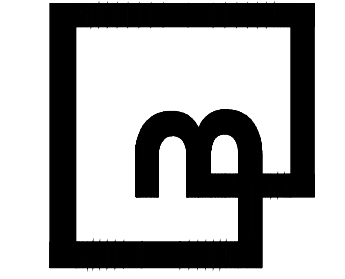
**Title:**  
FIRE LANE MARKING PLAN  
FORTRESS - PUYALLUP

**For:**  
CREF3 PUYALLUP OWNER LLC  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049



Designed	DL
Drawn	RDC
Checked	DL
Approved	JGH
Date	8/23/23

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



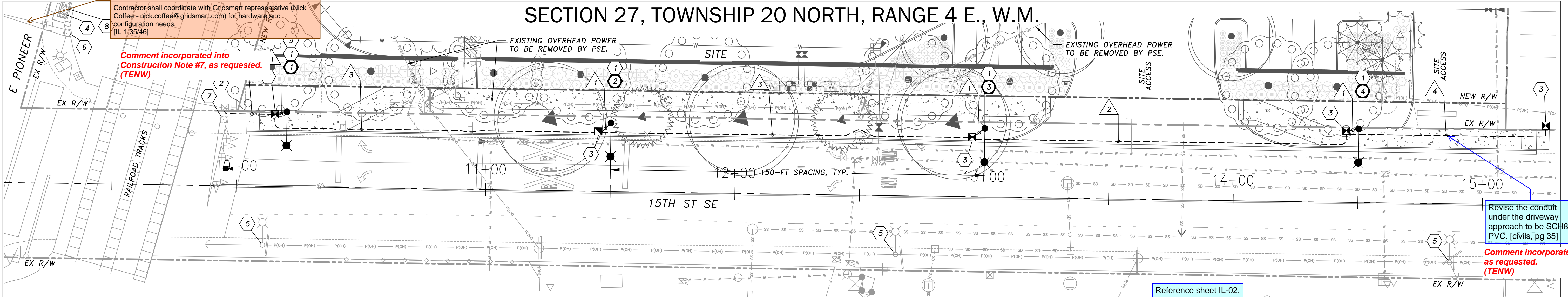
Job Number: **22085**  
Sheet: **C34** of **34**

Gridsmat Bell camera to be installed on existing streetlight near signal cabinet. Contractor to contact City of Puyallup signal technician for any coordination with traffic signal or streetlight installation. 253-341-8439.

Contractor shall coordinate with Gridsmat representative (Nick Coffee - nick.coffee@gridsmat.com) for hardware and configuration needs. [IL-1 35/46]

Comment incorporated into Construction Note #7, as requested. (TENW)

# SECTION 27, TOWNSHIP 20 NORTH, RANGE 4 E., W.M.



Revise the conduit under the driveway approach to be SCH80 PVC. [civils, pg 35]

Comment incorporated as requested. (TENW)

Reference sheet IL-02, the details are not shown on this sheet. [civils, pg 35]

### ILLUMINATION GENERAL NOTES

- THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES AND CABINETS SHOWN ON THIS PLAN MAY BE SLIGHTLY ADJUSTED IN THE FIELD TO AVOID CONFLICTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.
- ALL CONDUCTORS FOR ALL ELECTRICAL EQUIPMENT SHALL BE LABELED IN EACH JUNCTION BOX.
- ALL CONDUITS SHALL BE RIGID HOT-DIPPED GALVANIZED STEEL OR SCHEDULE 80 PVC WHEN EXPOSED ABOVE THE GROUND. SEE SPECIAL PROVISIONS.
- ALL JUNCTION BOXES SHALL BE PLACED BEHIND SIDEWALK, UNLESS OTHERWISE NOTED.
- ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP STANDARDS AND SPECIFICATIONS.
- THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR AS NECESSARY.
- THE CONTRACTOR SHALL SUBMIT A REQUEST TO THE INSPECTOR FOR MATERIALS APPROVAL MIN. 30-DAYS PRIOR TO REQUIRED APPROVAL DATE.
- ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY AGENCIES 48 HOURS BEFORE COMMENCING WORK AND SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY OF PUYALLUP IMMEDIATELY UPON DAMAGE.
- EXISTING FEATURES TO REMAIN UNLESS OTHERWISE NOTED.
- THE TOP ELEVATION OF ALL POLE FOUNDATIONS SHALL BE APPROVED BY THE INSPECTOR PRIOR TO PLACING CONCRETE.
- IF STREET LIGHT IS TO BE INSTALLED GREATER THAN 4 FEET FROM EDGE OF THE DRIVING SURFACE THE STREET LUMINAIRE ARMS SHALL BE ADJUSTED TO A DIMENSION THAT PROVIDES A MINIMUM OF 3-FT OVERHANG ONTO THE DRIVING SURFACE PER CITY OF PUYALLUP STANDARD PLAN 01.05.04.
- ANY NEW JUNCTION BOX WHICH WILL BE LOCATED WITHIN OR PARTIALLY WITHIN SIDEWALK SHALL HAVE LIDS AND FRAMES WITH A NON-SLIP COATING ON THE TOP SURFACE EQUAL TO MEBACT OR SLIPNOT#3.
- ALL PROJECT MATERIALS SHALL BE REVIEWED AND APPROVED BY THE CITY OF INSPECTOR PRIOR TO PROCUREMENT. MATERIALS NOT APPROVED BY THE CITY INSPECTOR SHALL NOT BE ALLOWED ON THE JOB SITE.
- SEE CITY OF PUYALLUP STANDARD PLANS 01.05.01 AND 01.05.02 FOR STREET LIGHT SPECIFICATIONS.
- A COPY OF THE LOAD CALCULATIONS SHALL BE PROVIDED TO THE CITY'S SIGNAL TECHNICIAN PRIOR TO INSTALLATION.

### CITY OF PUYALLUP ILLUMINATION GENERAL NOTES

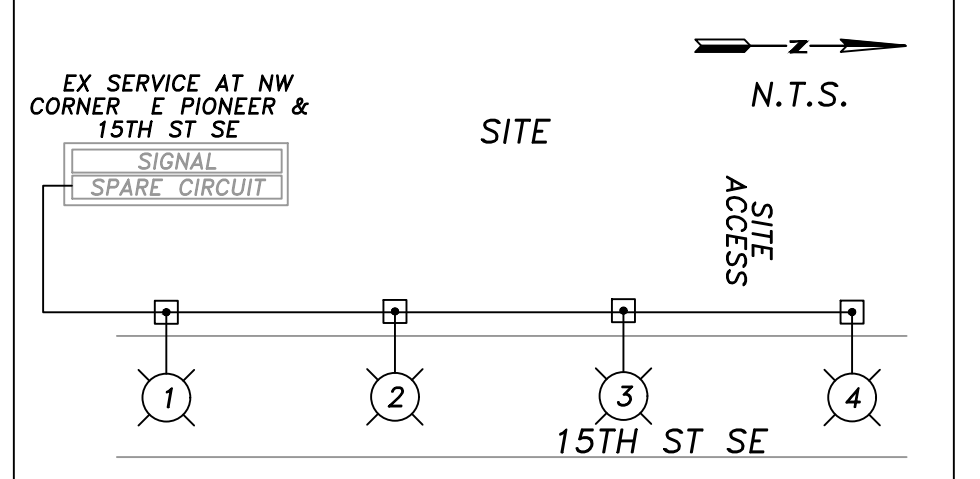
- ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP PUBLIC WORKS STANDARDS AND WSDOT STANDARDS AND SPECIFICATIONS.
- THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION START.
- UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY ILLUMINATION WORK.
- ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
- CONDUIT LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.
- CONTRACTOR SHALL COORDINATE WITH THE CITY SIGNAL/ILLUMINATION TECHNICIAN AT 253-405-4390 PRIOR TO CONSTRUCTION.
- THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES, AND CABINETS SHOWN ON THIS PLAN MAY BE ADJUSTED IN THE FIELD TO AVOID CONFLICTS AND MEET ADA REQUIREMENTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO CONSTRUCTION.
- JUNCTION BOX LOCATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. JUNCTION BOXES SHALL BE FIELD LOCATED BY THE CONTRACTOR WITH DIRECTION FROM THE CITY.
- CONTRACTOR SHALL ADJUST JUNCTION BOX LIDS TO BE FLUSH WITH TOP OF SIDEWALK.
- ANY NEW JUNCTION BOX WHICH WILL BE LOCATED WITHIN OR PARTIALLY WITHIN SIDEWALK SHALL HAVE LIDS AND FRAMES WITH A NON-SLIP COATING ON THE TOP SURFACE EQUAL TO MEBACT OR SLIPNOT#3.
- IT IS THE SOLE RESPONSIBILITY OF THE DESIGN ENGINEER TO ENSURE STREETLIGHT DESIGN/PLACEMENT IS OUTSIDE OF THE 10FT MINIMUM SAFE ZONE AREA FROM PSE PRIMARY.

### ILLUMINATION CONSTRUCTION NOTES

- CONSTRUCT FOUNDATION PER CITY OF PUYALLUP STANDARD AND INSTALL NEW LUMINAIRE WITH SHORTING CAP. POLE PUYALLUP STANDARD PLANS 01.05.01, 01.05.02, 01.05.04 ILLUMINATION POLE SCHEDULE, THIS SHEET.
- EXTEND NEW CONDUIT TO EXISTING JUNCTION BOX. PULL NEW ILLUMINATION CONDUCTORS THROUGH EXISTING CONDUIT TO EXISTING SERVICE CABINET. TERMINATE NEW CONDUCTORS IN EXISTING SERVICE CABINET.
- INSTALL NEW JUNCTION BOX PER CITY OF PUYALLUP STANDARD PLAN 01.06.01.
- EXISTING SERVICE CABINET TO REMAIN. ROUTE NEW ILLUMINATION CONDUCTORS THROUGH EXISTING CONDUIT TO EXISTING SERVICE CABINET. TERMINATE NEW ILLUMINATION CONDUCTORS TO SPARE CONTACTOR IN EXISTING SERVICE CABINET. IF NO SPARE CONTACTOR IS AVAILABLE, INSTALL NEW CONTACTOR AND TERMINATE NEW ILLUMINATION CONDUCTORS.
- EXISTING UTILITY POLE MOUNTED LUMINAIRE TO REMAIN.
- EXISTING TYPE III SIGNAL MAST ARM POLE TO REMAIN.
- FURNISH AND INSTALL VIDEO DETECTION SYSTEM PER CITY OF PUYALLUP STANDARD SPECIFICATIONS 9-29.18, EXCEPT SYSTEM SHALL BE GRIDSMART. MOUNT GRIDSMART VIDEO PROCESSING UNIT IN EXISTING CONTROLLER CABINET. PULL NEW VIDEO CONDUCTORS THROUGH EXISTING CONDUIT TO EXISTING SIGNAL CONTROLLER CABINET.
- EXISTING SIGNAL CONTROLLER CABINET TO REMAIN. DISCONNECT CONDUCTORS FOR 15TH ST SE SOUTHBOUND LOOP DETECTION AND PULL BACK TO EXISTING CONTROLLER CABINET AND DISCARD. CONTRACTOR SHALL INSTALL VIDEO EQUIPMENT IN SIGNAL CONTROLLER CABINET AS REQUIRED BY CITY OF PUYALLUP SPECIFICATIONS.
- FIELD FIT LIGHT POLE TO ENSURE THERE ARE NO OBSTRUCTIONS WITH RR FLASHER/SIGNING.

IL-02 sheet reference added after the standard plans callouts, as requested. (TENW)

### ILLUMINATION WIRING DIAGRAM



Provide note that requires video detection system to be installed and fully operational prior to disabling in-ground loop detection system. [IL-1 35/46]

existing streetlight near signal cabinet, coordinate with City signal tech 253-341-8439 IL-01 SH sheet 33 civil

Separate note added below construction notes, as requested. (TENW)

Comment incorporated as requested. (TENW)

### CITY OF PUYALLUP POLE SPACING REQUIREMENTS

ROADWAY	CLASSIFICATION	MAX. SPACING
15TH ST SE	MINOR ARTERIAL	150'

\* CITY OF PUYALLUP STANDARDS SECTION 102.12

### ILLUMINATION POLE SCHEDULE

LUM. POLE NO.	STREET	STATION *	OFFSET *	MOUNT. HEIGHT	VOLTAGE	ARM LENGTH	SERVICE CIRCUIT	WATTAGE /TYPE	INITIAL LUMENS	LUMINAIRE TYPE - DISTRIBUTION	SHORTING CAP	POLE TYPE	BASE	COMMENT
1	15TH ST SE	10+20.0 **	30.0' LT **	30'	240	12'	ILLUM A	194/LED	23,000	GE EVOLVE LED ERSL-0-23-C3-40-D-GRAY-A-L-VI	YES	ROUND STEEL	FIXED	FDN PER CITY OF PUYALLUP STD 01.05.06.
2	15TH ST SE	11+50.0	27.5' LT	30'	240	12'	ILLUM A	194/LED	23,000	GE EVOLVE LED ERSL-0-23-C3-40-D-GRAY-A-L-VI	YES	ROUND STEEL	FIXED	FDN PER CITY OF PUYALLUP STD 01.05.06.
3	15TH ST SE	13+00.0	27.5' LT	30'	240	12'	ILLUM A	194/LED	23,000	GE EVOLVE LED ERSL-0-23-C3-40-D-GRAY-A-L-VI	YES	ROUND STEEL	FIXED	FDN PER CITY OF PUYALLUP STD 01.05.06.
4	15TH ST SE	14+50.0	29.5' LT	30'	240	12'	ILLUM A	194/LED	23,000	GE EVOLVE LED ERSL-0-23-C3-40-D-GRAY-A-L-VI	YES	ROUND STEEL	FIXED	FDN PER CITY OF PUYALLUP STD 01.05.06.

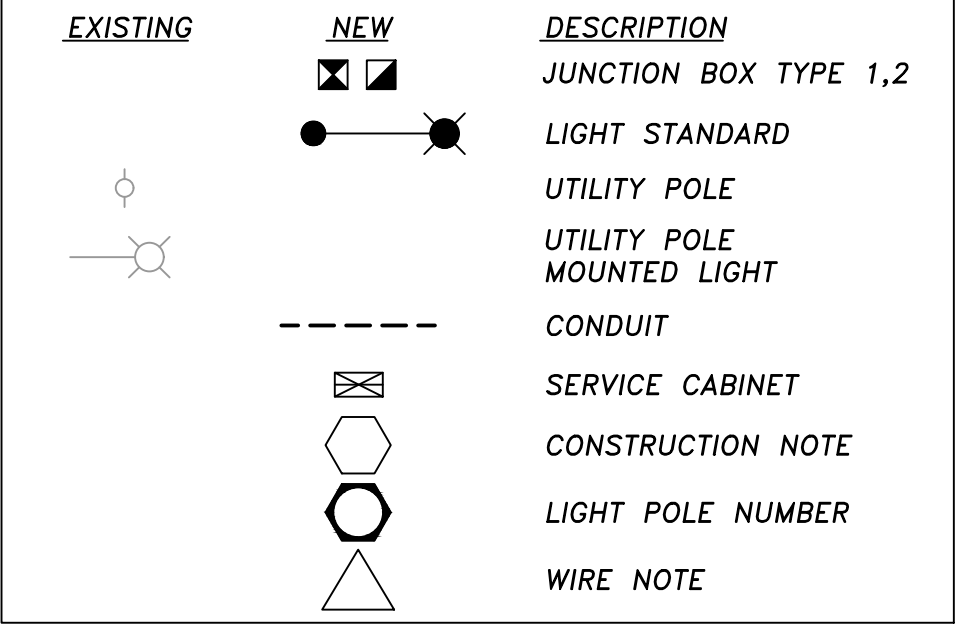
\* STATIONING AND OFFSETS ARE APPROXIMATE. CONTRACTOR SHALL CONFIRM ADJUSTMENTS WITH ENGINEER PRIOR TO IMPLEMENTING.  
\*\* FIELD FIT LIGHT POLE TO ENSURE THERE ARE NO OBSTRUCTIONS WITH RR FLASHER/SIGNING.

### ILLUMINATION WIRING SCHEDULE

RAVEWAY CONDUIT NO.	SIZE	ILLUM. #8	EQUIP. GRND * #2	POWER #2	DETECTABLE PULL WIRE
1	2" SCH40 PVC	2	1		
2	2" SCH80 PVC	2	1		
3	2" SCH40 PVC SPARE				1
4	2" SCH40 PVC SPARE				1
5	2" SCH40 PVC SPARE				1

\* EQUIPMENT GROUND SIZE SHALL BE EQUAL TO OR LARGER THAN THE LARGEST WIRE SIZE IN THE CONDUIT.

### ILLUMINATION LEGEND



FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
FIRE CODE OFFICIAL

DATE: \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.

Replace Fire Code Official approval block with City of Puyallup Development Engineering Approval Block. [civils, IL-01]

Comment incorporated as requested. (TENW)

REVISION	DATE	BY

DESIGNED BY:  
BVL/SSO

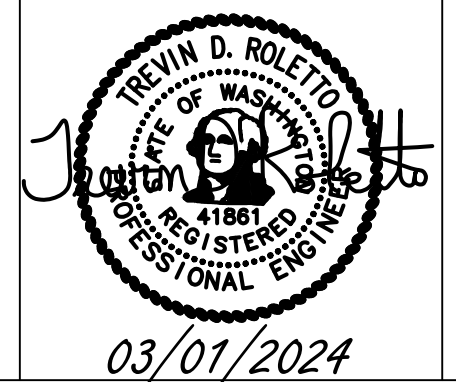
DRAWN BY:  
SSO

APPROVED BY:  
TDR

ISSUE DATE:  
03/01/2024

JOB NO.:  
TENW #2022-311

DRAWING FILE NO.:



**TENW**  
Transportation Engineering NorthWest  
Transportation Planning | Design | Traffic Impact & Operations  
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 869-6747  
Project Contact: Trevin Roletto, P.E.  
Phone: 425-250-0363

**FORTRESS INVESTMENT GROUP**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**FORTRESS PUYALLUP**  
  
**ILLUMINATION PLAN**

DRAWING NO.:  
IL-01

SHEET NO.:  
33  
OF  
44  
SHEETS

# SECTION 27, TOWNSHIP 20 NORTH, RANGE 4 E., W.M.

### STREET LIGHTING SPECIFICATIONS

- 30-FOOT STEEL STREETLIGHT STANDARD
  - DIMENSIONS
 

STREETLIGHT STANDARDS SHALL PROVIDE A FIXTURE MOUNTING HEIGHT OF 30'0" PLUS OR MINUS 6" WITH A TYPICAL 12 FOOT MAST ARM WITH A THREE FOOT OVERHANG.

BASE PLATE SHALL HAVE SLOTTED HOLES TO ACCOMMODATE 1-INCH ANCHOR BOLTS, AND 1 1/2" BOLT CIRCLE WITH MINIMUM CLEARANCE OF 1" BETWEEN BOLT AND POLE.

HANDHOLE CENTER SHALL BE LOCATED APPROXIMATELY 12 INCHES FROM THE BASE PLATE, ROTATED 270 DEGREES FROM MAST ARM SO AS THE HANDHOLE IS LOCATED ON THE SIDE OPPOSING ONCOMING TRAFFIC.
  - STRENGTH
 

POLES SHALL MEET ALL STRENGTH REQUIREMENTS OF AASHTO FOR 90 MPH ISOTACH WHEN USED WITH A LUMINAIRE WEIGHING 40 POUNDS WITH A E.P.A. OF 1.1 SQUARE FEET. ALL ATTACHING BOLTS AND SCREWS THAT ARE NOT GALVANIZED SHALL BE STAINLESS STEEL.
  - FINISH
 

THE POLES AND ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED, MINIMUM 3 MIL THICKNESS.
  - MAST ARM ATTACHMENT SHALL BE SECURED BY 3 BOLTS.
  - EACH POLE SHALL HAVE HANDHOLE (WITH COVER), GROUND LUG AND REMOVABLE POLE CAP.
  - EACH CITY POLE SHALL HAVE A BLACK 4" TO 6" LETTER C STENCILED ON ROADWAY SIDE OF POLE 16" ABOVE GRADE.
- ANCHORAGE
  - POLES SHALL BE ANCHORED WITH 4 BOLTS, 1"x3/8"x4" #8UNC WITH HOT DIPPED GALVANIZING AFTER THREADS ARE CUT. GALVANIZED AREA SHALL EXTEND FROM THREADED END FOR A MINIMUM OF 12 INCHES. BOLTS SHALL BE PROVIDED WITH 2 GALVANIZED NUTS AND FLAT WASHERS FOR LEVELING. SHIMS WILL NOT BE USED.
  - A NON-SHRINKING GROUT SHALL BE INSTALLED WITH ONE 1/2" DRAIN HOLE UNDER THE BASE PLATE AFTER THE ENGINEER HAS APPROVED THE POLE INSTALLATION.
- CONDUIT
 

ALL CONDUIT SHALL BE BURIED A MINIMUM OF 24 INCHES DEEP. ALL ROADWAY CROSSINGS SHALL BE RIGID METALLIC OR SCHEDULE 80 PVC. CONDUIT SHALL CONFORM TO SECTION 9-29 OF WSDOT STANDARD SPECIFICATIONS. SCHEDULE 80 PVC MAY BE USED IN LOCATIONS OTHER THAN ROADWAY CROSSINGS.

### (STR LIGHT SPECS CONTINUED)

- JUNCTION BOXES (WHEN REQUIRED)
 

JUNCTION BOXES SHALL BE INSTALLED AT LOCATIONS AS SHOWN ON THE PLANS. THEY WILL CONFORM TO WSDOT STANDARD PLAN J-40.10-02, TYPE 1. THEY SHALL BE LEVEL WITH THE SIDEWALK GRADE AND FIRMLY BEDDED TO PREVENT FUTURE SETTLING. JUNCTION BOXES ARE PREFERRED NOT TO BE INSTALLED IN THE SIDEWALK. THE COVER SHALL BE GALVANIZED AND GROUTED. THE LETTERS "1" SHALL BE ETCHED ON THE COVER. (SEE CITY STANDARD DETAIL NO. 01.06.01). IF THE JUNCTION BOX IS NOT IN THE SIDEWALK THEN IT SHALL HAVE A CONCRETE COLLAR. IF THE JUNCTION BOX IS IN THE SIDEWALK THEN IT SHALL HAVE A NON-SLIP SURFACE TREATMENT. SEE CITY STANDARD DETAIL NO. 01.06.01.
- CONDUCTORS, WIRES, ETC.
 

WIRE CONDUCTORS FOR UNDERGROUND FEEDER RUNS AND FOR CIRCUITRY FROM THE IN-LINE FUSE IN THE POLES TO THE JUNCTION BOX SHALL BE 600 VOLT, SINGLE CONDUCTOR STRANDED COPPER AND INSULATED WITH USE GRADE POLYVINYL CHLORIDE COMPOUND (XLP) OR APPROVED EQUAL IN ACCORDANCE WITH THE INSULATED POWER CABLE ENGINEER'S ASSOCIATION SPECIFICATIONS. AN AWG NO. 8 GREEN INSULATED STRANDED COPPER WIRE WILL BE RUN TO THE SERVICE GROUND LUG ON EACH POLE. FEEDERS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. WIRES INSIDE THE POLE BETWEEN BALLAST AND IN-LINE FUSES SHALL BE HOME 20 AWG TO STRANDED POLE AND BRACKET WIRE OR APPROVED EQUAL. SPLICES WILL BE ALLOWED IN JUNCTION BOXES AND POLE BASES ONLY. NO MORE THAN 2 CONDUITS WILL BE ALLOWED INSIDE THE STREET POLE.
- FUSES
 

LUMINAIRE FUSING AND ELECTRICAL CONNECTIONS AT LIGHT STANDARD BASES SHALL CONFORM TO SECTION 9-29.7 OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS AND AS SHOWN ON THE UNIFORM LUMINAIRE WIRING DETAIL IN THE APPENDIX. IN-LINE FUSE HOLDERS SHALL BE SEC MODEL 1791-SF WITH FNM-5 FUSES OR APPROVED EQUAL. (REFER TO CITY STANDARD DETAIL NO. 01.06.01)
- LUMINAIRES AND LAMPS
 

**RESIDENTIAL STREETS AND NEIGHBORHOOD COLLECTORS:**  
LED LUMINAIRE LED GC1-40E-WV-2-530 (87 WATT LED)

**ARTERIALS AND COMMERCIAL COLLECTORS:**  
GE EVOLVE LED ERSL-0-23-C3-40-D-GRAY-A4-V1 (194 WATT LED)

THE CITY WILL ENERGIZE THE STREET LIGHTS WHEN A HOME IS OCCUPIED ADJACENT TO A STREET LIGHT OR IMMEDIATELY ACROSS THE STREET. AT THE DEVELOPER'S REQUEST, STREET LIGHTS MAY BE ENERGIZED PRIOR TO OCCUPANCY OF HOMES. HOWEVER, THE DEVELOPER OR BUILDER SHALL ASSUME FULL RESPONSIBILITY FOR ELECTRICAL POWER COSTS AND REPAIR COSTS DUE TO VANDALISM, THEFT, OR CONSTRUCTION.
- SAFE WIRING LABELS
 

THE CONTRACTOR IS ADVISED THAT SAFE WIRING LABELS REQUIRED BY LABOR AND INDUSTRIES SHALL APPLY ON THIS PROJECT. (ELECTRICAL INSPECTION STICKER)
- WARRANTY
 

THE CONTRACTOR SHALL SURRENDER TO THE CITY OF PUYALLUP ANY WARRANTY OR WARRANTY ACQUIRED BY HIM AS A NORMAL TRADE PRACTICE IN CONNECTION WITH THE PURCHASE OF ANY MATERIALS OR ITEMS USED IN THE CONSTRUCTION OF THE ILLUMINATION.
- LOCATION
 

SEE CITY STANDARD SECTION 01.01 ROADWAY DESIGN.

### TYPICAL STREET LIGHT INSTALLATION

**NOTES:**

- A METER SERVICE DISCONNECT IS REQUIRED FOR EACH BRANCH CIRCUIT. SEE CITY STANDARD DETAIL NO. 01.05.05
- INSTALLATION SHALL CONFORM TO NATIONAL ELECTRICAL CODE, WSDOT, AND CITY STANDARDS.
- PHASING TAPE IS NOT ALLOWED.
- ALL WIRES SHALL BE INSTALLED IN CONDUIT AS SPECIFIED ABOVE.
- ALL SPLICES SHALL BE MADE IN A JUNCTION BOX. WIRE NUTS WILL NOT BE ALLOWED. SPLICES SHALL BE CENTERED AND ENCASED IN 3M SCOTCHCAST EPOXY KIT TYPE 82-A1, 82-B1, OR CITY APPROVED EQUAL. OTHER GEL TAP SPLICE KITS AND DIRECT BURIAL AND SUBMERSIBLE SPLICES TO BE ALLOWED IF APPROVED BY THE CITY.
- GROUND ROD COVER SHALL BE UTILITY VAULT #9V9-924 OR APPROVED EQUIVALENT.

### STREET LIGHT

**NOTE:**

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE INSTALLATION OF THE STREET LIGHT SYSTEM WITH ALL UTILITIES, PRIVATE AND PUBLIC, TO AVOID SCHEDULE AND LOCATION CONFLICTS.
- FOR RESIDENTIAL STREET LIGHTING THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL ONE METER FOR THE PLANT'S LIGHTING SYSTEM PER PUGET SOUND ENERGY REQUIREMENTS. ON VERY LARGE PLANTS PUGET SOUND ENERGY MAY REQUIRE MORE THAN ONE METER.
- LUMINAIRE TO BE FLAT LENS GLASS WITH CUT OFF, 150W FOR SIGNALIZED INTERSECTIONS, 150W OR 200W FOR COMMERCIAL AREA AND 100W FOR RESIDENTIAL.

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STREET LIGHT SPECIFICATIONS				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.05.01

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STREET LIGHT SPECIFICATIONS (CONT.)				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.05.02

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	TYPICAL STREET LIGHT INSTALLATION				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.05.03

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	STREET LIGHT				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.05.04

### CONCRETE STREETLIGHT FOUNDATION TYPICAL

**NOTE:**

- CONTRACTOR IS TO VERIFY THAT DETAIL SPECIFICATIONS AND EQUIPMENT LOCATIONS MEET WITH SERVING UTILITIES AND CITY OF PUYALLUP ENGINEERING REQUIREMENTS.
- FOUNDATION TO BE 10" ROUND. TOP 5-1/2" OF FOUNDATION WILL BE 24" SQUARE.

### JUNCTION BOX

**NOTES:**

- SEE W.S.D.O.T. STANDARD PLAN J-40.10-03 FOR J-BOX TYPE AND SIZE.
- ALL LIDS SHALL BE GALVANIZED STEEL AND MARKED WITH AN "L" OR "TS" PER W.S.D.O.T. STANDARD PLAN J-40.10-03. NON-SLIP SURFACE TREATMENT SHALL BE MEGA1 OR SIGNOT #3.
- TYPE III SHALL BE DUAL HINGED.
- IF NO SIDEWALK EXISTS, A CONCRETE COLLAR SHALL BE CONSTRUCTED 6" THICK, 6" WIDE, COMPLETELY SURROUNDING THE J-BOX WITH ONE #4 REBAR ON CENTER EACH SIDE AND TIED AT CORNERS. CLASS 5 (1 1/2) CONCRETE SHALL BE USED. IF PERMISSION, COLLAR MAY ENCOMPASS JUNCTION BOX AND STREET LIGHT. PREFERRED LOCATION OF JUNCTION BOX SHOULD NOT BE IN THE SIDEWALK, BUT RATHER AT THE BACK OF SIDEWALK WITH 3-SIDED COLLAR.
- CONDUIT RUNS SHALL NOT EXCEED 195 FEET BETWEEN JUNCTION BOXES.
- JUNCTION BOX SHALL BE LOCATED WITHIN 10 FEET OF EACH LUMINAIRE POLE AND AT ROAD CROSSING.
- CONDUIT MATERIAL SHALL BE AS SPECIFIED IN WSDOT STANDARD SPECIFICATION 8-20.3(5) OR AS MODIFIED ON SPECIAL PROVISIONS.
- STREET LIGHT JUNCTION BOXES SHALL BE WELDED SHUT, 2"-2" LONG WELDS MIN., IMMEDIATELY AFTER L & I AND CITY INSPECTIONS TO HELP PREVENT WIRE THEFT. OTHER THEFT PREVENTION METHODS MAY BE USED IF APPROVED BY THE CITY.

### VIDEO CAMERA DETECTION

**NOTES:**

- CAMERA PLACEMENT SHALL BE SO CAMERA LINES UP WITH THE LANE LINE BETWEEN THE LEFT TURN POCKET AND THE THRU LANE.

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	CONCRETE STREETLIGHT FOUNDATION TYPICAL				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.05.06

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	JUNCTION BOX				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.06.01

CITY OF PUYALLUP DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS	VIDEO CAMERA DETECTION				
	DESIGNED BY TIM BERNHARDT	CHECKED BY LINDA LIAN	APPROVED BY COLLEEN HARRIS	REVISED BY LINDA LIAN	CITY STANDARD 01.06.07

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
FIRE CODE OFFICIAL

DATE \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.

this should be modified to reflect the Gridsmart bell camera...sheet 34 IL-02 SH

**Comment incorporated as requested. See construction notes 7 & 8. (TENW)**



**TENW**  
Transportation Engineering NorthWest  
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 869-6747  
Project Contact: Trevin Roletto, P.E.  
Phone: 425-250-0353

**FORTRESS INVESTMENT GROUP**  
11611 SAN VICENTE BLVD  
10TH FLOOR  
LOS ANGELES, CA 90049

**FORTRESS PUYALLUP**  
  
**ILLUMINATION DETAILS**

REVISION	DATE	BY

DESIGNED BY:  
BVL/SSO

DRAWN BY:  
SSO

APPROVED BY:  
TDR

ISSUE DATE:  
03/01/2024

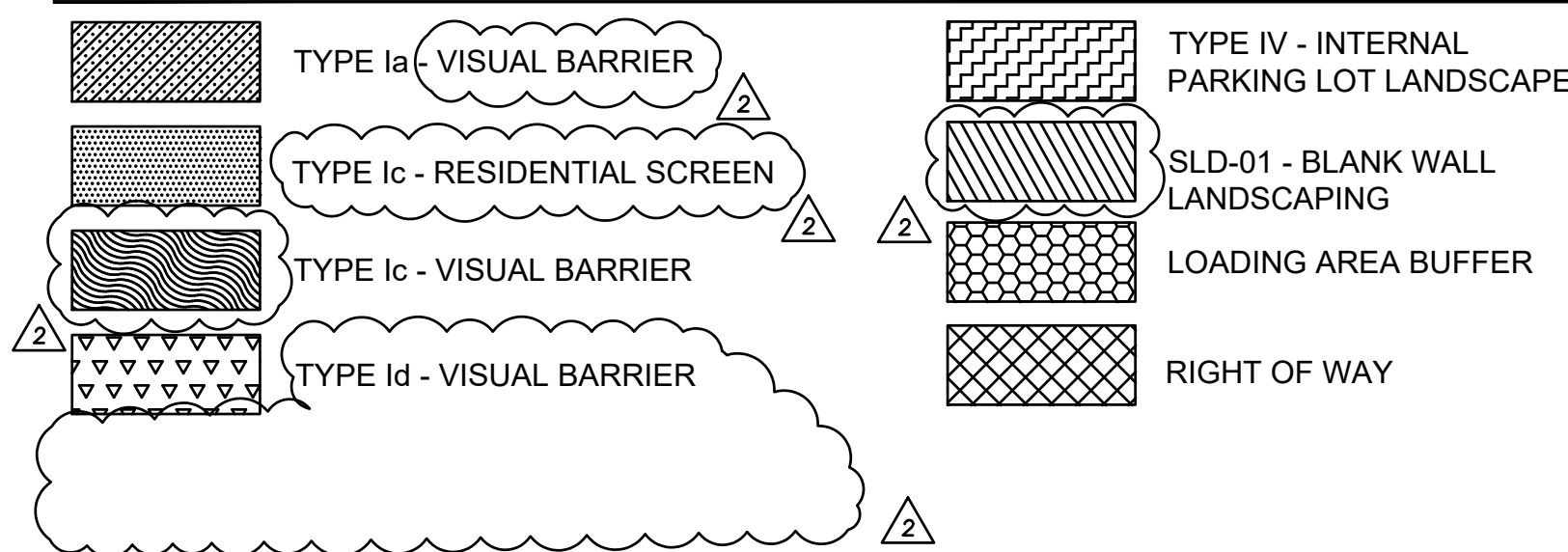
JOB NO.:  
TENW #2022-311

DRAWING FILE NO.:

DRAWING NO.:  
IL-02

SHEET NO.:  
34  
OF  
44  
SHEETS

**CODE LEGEND**



**PLANT SCHEDULE**

\* DENOTES PUGET SOUND NATIVE PLANT \*\* DENOTES PNW NATIVE CULTIVAR

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY	
<b>TREES</b>				
☐	<i>CALOCEDRUS DECURRENS</i> INCENSE CEDAR CLASS II TREE (50' H X 15' W)	8' HT. MIN. B&B	2	
☐	<i>CEDRUS DEODARA</i> DEODAR CEDAR	6' HT. MIN.	17	
☐	<i>CHAMAECYPARIS OBTUSA</i> HINOKI FALSE CYPRESS CLASS III TREE (50' H X 15' W)	8' HT. MIN. B&B	25	
☐	<i>FAGUS SYLVATICA</i> 'TRICOLOR' TRICOLOR EUROPEAN BEECH CLASS IV TREE (60' X 45')	2" CAL. B&B	4	
☐	<i>GINKGO BILOBA</i> 'AUTUMN GOLD' AUTUMN GOLD MAIDENHAIR TREE CLASS III TREE (45' X 35')	2" CAL. B&B	7	
☐	<i>GLEDITSIA TRIACANTHOS</i> 'INERMIS' 'DRAVES' STREET KEEPER® HONEY LOCUST CLASS II TREE (45' H X 20' W)	2" CAL., B&B	1	
☐	<i>LIRODIODENDRON TULIPIFERA</i> TULIP POPLAR CLASS IV TREE (60' H X 35' W)	2" CAL., B&B	9	
☐	<i>NYSSA SYLVATICA</i> TUPELO CLASS III TREE (35' X 20')	2" CAL. B&B	14	
☐	<i>OXYDENDRUM ARBOREUM</i> SOURWOOD TREE CLASS III TREE (30' X 15')	2" CAL. B&B	5	
☐	<i>PICEA OMORIKA</i> SERBIAN SPRUCE CLASS III TREE (50' H X 20' W)	8' HT. MIN. B&B	34	
☐	<i>PINUS NIGRA</i> AUSTRIAN PINE CLASS IV TREE (50' X 25')	6' HT. MIN. B&B	19	
☐	<i>PINUS PONDEROSA</i> PONDEROSA PINE CLASS IV TREE (100' X 35')	6' HT. MIN.	3	
☐	<i>QUERCUS PALUSTRIS</i> 'PRINGREEN' GREEN PILLAR® PIN OAK CLASS II TREE (45' H X 15' W)	2" CAL., B&B	3	
☐	<i>QUERCUS X 'CRIMSCHMIDT'</i> CRIMSON SPIRE™ OAK CLASS II TREE (45' H X 15' W)	2" CAL. B&B	2	
☐	<i>TILIA TOMENTOSA</i> 'STERLING' STERLING SILVER LINDEN CLASS III TREE (45' H X 30' W)	2" CAL. B&B	9	
☐	<i>ULMUS AMERICANA</i> 'VALLEY Forge' VALLEY Forge AMERICAN ELM CLASS IV TREE (80' H X 60' W)	2" CAL. B&B	4	
☐	<i>ZELKOVA SERRATA</i> 'VILLAGE GREEN' SAWLEAF ZELKOVA CLASS III TREE (40' H X 40' W)	2" CAL., B&B	5	
<b>EXISTING</b>				
☐	EXISTING CONIFER TREE TO REMAIN	---	6	
☐	EXISTING DECIDUOUS TREE TO REMOVE	---	2	
SYMBOL	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
<b>SHRUBS</b>				
☐	<i>ARBUTUS UNEDO</i> 'COMPACTA' COMPACT STRAWBERRY TREE	5 GAL.	60" o.c.	126
☐	<i>CORNUS STOLONIFERA</i> 'KELSEY' KELSEY DOGWOOD	3 GAL.	24" o.c.	375
☐	<i>GAULTHERIA SHALLOON</i> * SALAL	3 GAL.	30" o.c.	291
☐	<i>ILEX ORENATA</i> 'SKYPENCIL' SKYPENCIL JAPANESE HOLLY	4' HT. MIN.	48" o.c.	117
☐	<i>JUNIPERUS SCOPULORUM</i> 'SKYROCKET' SKYROCKET JUNIPER	8' HT. MIN.	48" o.c.	28
☐	<i>MAHONIA AQUIFOLIUM</i> * OREGON GRAPE	5 GAL. 48" HT. MIN.	48" o.c.	184
☐	<i>NANDINA DOMESTICA</i> 'GULF STREAM' GULF STREAM HEAVENLY BAMBOO	3 GAL.	36" o.c.	48
☐	<i>NANDINA DOMESTICA</i> 'LEMON LIME' LEMON LIME NANDINA	3 GAL.	42" o.c.	21
☐	<i>PIERIS JAPONICA</i> 'MOUNTAIN FIRE' MOUNTAIN FIRE JAPANESE PIERIS	3 GAL.	60" o.c.	80
☐	<i>RHODODENDRON MACROPHYLLUM</i> * PACIFIC RHODODENDRON	5 GAL.	60" o.c.	27
☐	<i>RIBES SANGONINUM</i> * RED FLOWERING CURRANT	5 GAL.	48" o.c.	106
☐	<i>SYMPHORICARPUS ALBUS</i> * COMMON WHITE SNOWBERRY	3 GAL.	48" o.c.	75
☐	<i>THUJA OCCIDENTALIS</i> 'SMARAGD' EMERALD GREEN ARBORVITAE	12' HT. MIN.	48" o.c.	66
☐	<i>THUJA OCCIDENTALIS</i> 'SMARAGD' EMERALD GREEN ARBORVITAE	8' HT. MIN.	48" o.c.	135
<b>GROUNDCOVER</b>				
☐	<i>PENNISETUM ALOPECUROIDES</i> 'HAMELN' HAMELN FOUNTAIN GRASS	1 GAL.	24" o.c.	92
<b>VINES</b>				
☐	<i>LONICERA X 'MANDARIN'</i> MANDARIN HONEYSUCKLE	1 GAL.	24" o.c.	38

**LANDSCAPE NOTES**

- GENERAL**
- CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
  - CALL BEFORE YOU DIG. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF ALL UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT IF THERE ARE ANY DISCREPANCIES WITH PLANTING ROOT ZONES. TO REQUEST LOCATES FOR PROPOSED EXCAVATION CALL 1-800-424-5555 (OR 811) IN WASHINGTON.
  - NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS WITH EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
  - LOCATION OF EXISTING TREES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
  - VEGETATION PROTECTION SHALL BE INSTALLED PRIOR TO ANY WORK COMMENCING. STACKING, STORING, STOCKPILING, OR ACCUMULATION OF GOODS OR MATERIALS IS PROHIBITED IN THE ROOT PROTECTION ZONE. SEE TREE PROTECTION DETAIL 9/LS.13 AND PUYALLUP APPENDIX 20 FOR TREE PROTECTION STANDARDS ON CONSTRUCTION SITES.
  - DAMAGE TO EXISTING CONCRETE CURB, ASPHALT PAVING, OR OTHER STRUCTURE SHALL BE REPAIRED OR REPLACED TO PRE CONSTRUCTION CONDITIONS.
  - CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY DISRUPTION TO VEHICULAR CIRCULATION PRIOR TO COMMENCEMENT OF ANY WORK.
- IRRIGATION**
- UNLESS OTHERWISE INDICATED, ALL NEW LANDSCAPE AREAS TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. PROVIDE LOOP SYSTEM FOR OPTIMUM EFFICIENCY.
  - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (IRRIGATION PLANS) TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. DRAWINGS TO INDICATE HEAD TYPE, GALLONS PER MINUTE, LATERAL LINES, AND BE AT MINIMUM SCALE OF 1"=20'
  - CONTRACTOR TO DETERMINE STATIC WATER PRESSURE AT THE P.O.C. PRIOR TO PREPARING SHOP DRAWINGS.
  - CONTRACTOR SHALL ESTABLISH MINIMUM PRESSURE AND MAXIMUM DEMAND REQUIREMENTS FOR IRRIGATION SYSTEM DESIGN, AND PROVIDE INFORMATION IN AN IRRIGATION SCHEDULE.
  - IRRIGATION SYSTEM AS DESIGNED AND INSTALLED SHALL PERFORM WITHIN THE TOLERANCES AND SPECIFICATIONS OF THE SPECIFIED MANUFACTURERS.
  - SYSTEM SHALL BE DESIGNED TO SUPPLY MANUFACTURER'S SPECIFIED MINIMUM OPERATING PRESSURE TO FARTHEST EMITTER FROM WATER METER.
  - SYSTEM SHALL PROVIDE HEAD TO HEAD COVERAGE WITHOUT OVSERSPRAY ONTO BUILDING, FENCES, SIDEWALKS, PARKING AREAS, OR OTHER NON-VEGETATED SURFACES.
  - ALL IRRIGATION PIPE MATERIAL AND INSTALLATION SHALL CONFORM TO APPLICABLE CODE FOR PIPING AND COMPONENT REQUIREMENTS.
  - PROVIDE SLEEVEING AT ALL AREAS WHERE PIPE TRAVELS UNDER CONCRETE OR HARD SURFACING.
  - VALVES SHALL BE WIRED AND INSTALLED PER MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND CONNECTED TO THE IRRIGATION CONTROLLER.
  - REFER TO CIVIL DETAILS AND DETAILS ON L5.12 FOR POINT OF CONNECTION AND BACKFLOW PREVENTION INFORMATION.
  - CONTROLLER TO BE MOUNTED ON BUILDING EXTERIOR. GENERAL CONTRACTOR TO COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE.
  - ZONE THE FOLLOWING AREAS SEPARATELY: TEMPORARY AREAS, PERMANENT LANDSCAPE AREAS, AND TREES.
  - QUICK COUPLERS TO BE PLACED EVERY 300 LINEAR FEET MAX.
  - IRRIGATION SHALL BE WINTERIZED THROUGH LOW PRESSURE, HIGH VOLUME AIR BLOWOUT CONNECTION THROUGH QUICK COUPLER.
  - THE SYSTEM SHALL BE GRAVITY DRAINED. THE CONTRACTOR SHALL PROVIDE APPROPRIATE MANUAL DRAINS AT LOW POINTS.

**SHEET INDEX**

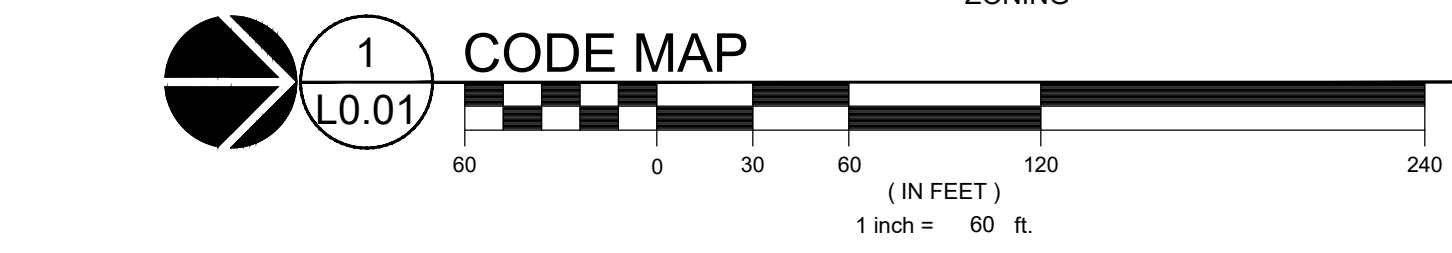
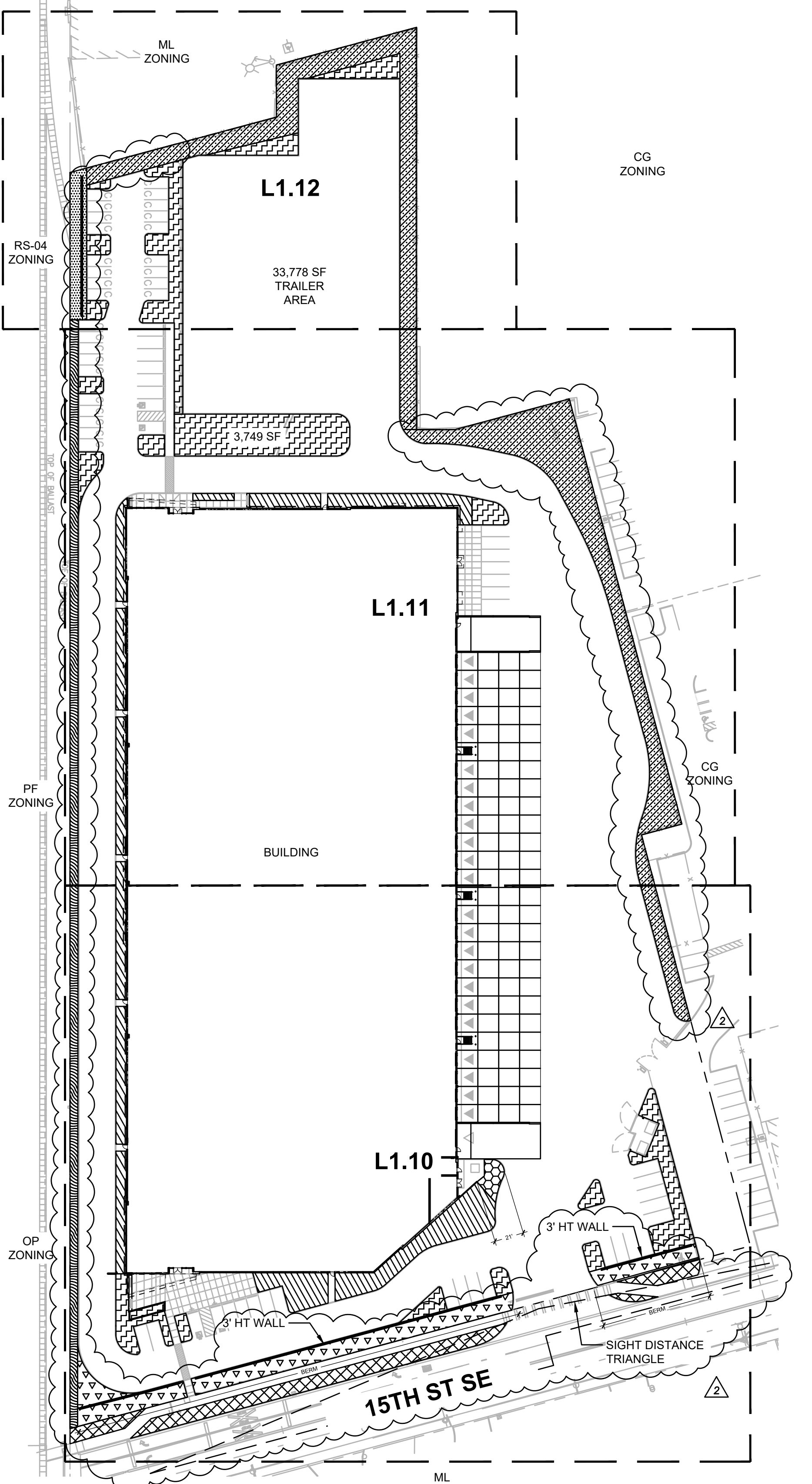
L0.01	LANDSCAPE GENERAL INFORMATION
L1.10	PLANTING PLAN EAST
L1.11	PLANTING PLAN CENTRAL
L1.12	PLANTING PLAN WEST
L1.20	MATERIALS AND LAYOUT PLAN
L5.10	SITE DETAILS
L5.11	SOIL DETAILS
L5.12	IRRIGATION DETAILS
L5.13	PLANTING DETAILS
L5.14	STREET PLANTING DETAILS

**TABLE OF ABBREVIATIONS**

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	GAL	GALLON MIXTURE
B&B	BALL AND BURLAP	POC	POINT OF CONNECTION
CAL	CALIPER	PVC	POLY VINYL CHLORIDE

**SITE INFORMATION**

JURISDICTION	PUYALLUP, WA
STORMWATER ZONE	PUYALLUP 2015 ML
<b>SITE AREA</b>	
TOTAL LANDSCAPE AREA	341,226 SF (7.82 AC)
TOTAL COMPOST AMENDED TOPSOIL (6" DEPTH)	52,676 SF 1,301 CY
<b>NATIVE PLANT MATERIAL</b> (MIN 50% OF SHRUBS AND GROUND COVER)	
TOTAL SHRUBS	1,679 SHRUBS (100%)
NATIVE SHRUBS	1,058 SHRUBS (63%)
TOTAL GROUND COVER	27,160 SF (100%)
NATIVE GROUND COVER	15,370 SF (56.6%)
<b>TYPE Ia - BUFFER</b>	
CONIFER TREES (CLASS III OR IV)	15' AVERAGE
BUFFER WIDTH (15 FT MIN)	6' HT MIN
HEDGE (6 FT HT MIN)	6' HT FENCE
WALL OR FENCE ALONG PROPERTY LINE (6' HT MIN)	6' HT FENCE
<b>BUFFER TYPE Ic - RESIDENTIAL SCREEN</b>	
TREES (CLASS III OR IV, 45 FT HT MIN)	6 FT HT
EVERGREEN HEDGE (6 FT HT MIN, 5' OC MAX)	6 FT HT WALL
WALL (6 FT HT MIN)	6 FT HT WALL
BUFFER WIDTH (<15 FT)	
<b>TYPE Ic - VISUAL BARRIER</b>	
TREES (CLASS III OR IV)	6 FT HT
EVERGREEN HEDGE (6' HT MIN, 5' OC MAX)	6 FT
BUFFER WIDTH (6' MIN)	
<b>TYPE Id - FRONTAGE</b>	
TREES (CLASS III OR IV, EVERGREEN)	6 FT HT
EVERGREEN HEDGE (6 FT HT MIN, 5 FT OC MAX)	6 FT
BUFFER WIDTH (12 FT MIN)	
WALL (3 FT HT MIN)	
BERM (3:1 SLOPE)	
<b>TYPE IV - INTERNAL PARKING LOT LANDSCAPE</b>	
OVERALL SITE AREA	341,226 SF (100%)
PAVED AREA	157,746 SF (100%)
LANDSCAPE AREA (10% MIN)	22,051 SF (13.9%)
PARKING LOT LANDSCAPE AREA	9,083 SF
TRAILER LANDSCAPE AREA	3,749 SF
SLD-01 LANDSCAPE AREA	9,219 SF
TOTAL TREES	47 TREES (100%)
TOTAL CONIFER TREES (50% MIN)	18 TREES (58.3%)
<b>TRAILER AREA*</b>	
PAVED AREA	33,012 SF (100%)
LANDSCAPE AREA (10% MIN)	3,749 SF (11.4%)
*IN LIEU OF PROVIDING ISLANDS WITHIN THE TRAILER AREA, AN EQUIVALENT AREA OF LANDSCAPE IS PROVIDED ADJACENT TO THE TRAILER AREA.	
<b>SLD-01 BLANK WALL LANDSCAPING</b>	
BLANK WALL SCREEN MITIGATION STAFF IS SUPPORTIVE OF REDUCING THE BLANK WALL PLANTER WIDTH ALONG THE SOUTH SIDE OF THE BUILDING DEPENDENT UPON MITIGATION IN THE FORM OF CU-STRUCTURAL SOIL IN A TOTAL SOIL VOLUME EQUAL TO THAT WHICH WOULD HAVE BEEN PROVIDED IF THE FULL 15' PLANTER WIDTH HAD BEEN INSTALLED.	
<b>MITIGATION LENGTH</b>	
STANDARD SOIL VOLUME (15' WIDE PLANTER X 8" DEPTH TOPSOIL X 550 LF)	204 CY OF SOIL
MITIGATION SOIL VOLUME (7' WIDE PLANTER X 8" DEPTH TOPSOIL X 550 LF) (3' WIDE CU STRUCTURAL SOIL X 24" DEPTH X 550 LF)	217 CY OF SOIL 95 CY OF SOIL 122 CY OF SOIL
<b>LOADING AREA BUFFER</b>	
PER PMC 20.26-400(3) & 20.26.500(1)	21 LF
TREES (1 PER 15')	1 TREE
SHRUBS (6' HT MIN)	6' FT HT



**GROUND COVERS**

<i>CALAMAGROSTIS X ACUTIFLORA</i> 'KARL FOERSTER'	1 GAL.	24" o.c.	1,509 SF
<i>KARL FOERSTER</i> FEATHER REED GRASS			
<i>CAREX OBLIQUA</i> * SLOUGH SEDGE	1 GAL.	18" o.c.	541 SF
<i>MAHONIA REPENS</i> * CREEPING MAHONIA	1 GAL.	18" o.c.	1,758 SF
<i>POLYSTICHUM MUNITUM</i> *	1 GAL.	24" o.c.	3,513 SF
ROCK MULCH MAINTENANCE BAND 1"-2" ROUND ROCK	---		1,347 SF
<i>RUBUS CALYCIINOIDES</i> 'EMERALD CARPET' EMERALD CARPET CREEPING-BRAMBLE	1 GAL.	18" o.c.	10,281 SF
SUNMARK SEEDS - NATIVE ECOTURF * <i>FESTUCA RUBRA</i> , <i>BOUTELOUA GRACILIS</i> , <i>BUCHOLE DACTYLOIDES</i> , <i>KOELERIA MACRANTHA</i> , <i>TRIFOLIUM FRAGIFERUM</i>	BLBS/1000SF		3,231 SF
UNDERSTORY BLEND 50% MAHONIA REPENS, 50% POLYSTICHUM MUNITUM	1 GAL.	24" o.c.	6,327 SF

Include City of Puyallup Planning Division Approval block on all landscape sheets. [civils, pg 37]

Approval block added to all landscape sheets.



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Client  
CREF3 PUYALLUP  
OWNER LLC

11611 SAN VICENTE  
BLVD  
10TH FLOOR  
LOS ANGELES  
CA 90049

Project  
FORTRESS -  
PUYALLUP

240 15TH ST SE  
PUYALLUP, WA,  
98372



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WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE

Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/28/2024

**LANDSCAPE GENERAL INFORMATION**

DRAWN BY: LJM

CHECKED BY: NRF

SHEET:

**L0.01**

JOB NO. 2220290.00

MATCHLINE - SEE L1.11

Concerns have been raised about tree choices adjacent to railway. Please replace the Type Ic trees along the southern property line abutting the railway with a continuous evergreen hedge (e.g., arborvitae, Leyland cypress, etc.) that will provide 100 percent screening from ground level to 6 feet within three years of installation [civil plans, L1.10]

All trees removed. Added continuous arborvitae hedge along the southern property line abutting the railroad. Arborvitae sized to meet 6ft ht within 3 years of installation. See L1.10-L1.12.

LDING

CU-STRUCTURAL SOIL TO EXTEND ALONG SOUTH SIDE OF BUILDING FROM EDGE OF CURB TO 15' FROM EDGE OF BUILDING PER BLANK WALL SCREENING MITIGATION NOTED ON L0.01

(P) TRANSFORMER

CU-STRUCTURAL SOIL SEE DETAIL 1/L5.11

(P) WALL

(P) CU-STRUCTURAL SOIL SEE DETAIL 1/L5.11

PIV, KEEP SHRUBS 3FT CLEAR

(P) BENCH (QTY 2)  
(P) BIKE RACK (QTY 2)

(P) SOIL CELLS SEE DETAIL 4/L5.11

(P) SOIL CELLS, TYP. SEE DETAIL 5/L5.11

(P) SOIL CELLS, TYP. SEE DETAIL 5/L5.11

IRRIGATION POINT OF CONNECTION

(P) LIGHT POLE

(P) STREET TREES, TYP. SEE DETAIL 1/L5.14

(E) HYDRANT

(P) LIGHT POLE

SIGHT DISTANCE TRIANGLE

15TH ST SE

3 FT HT WALL AND BERM

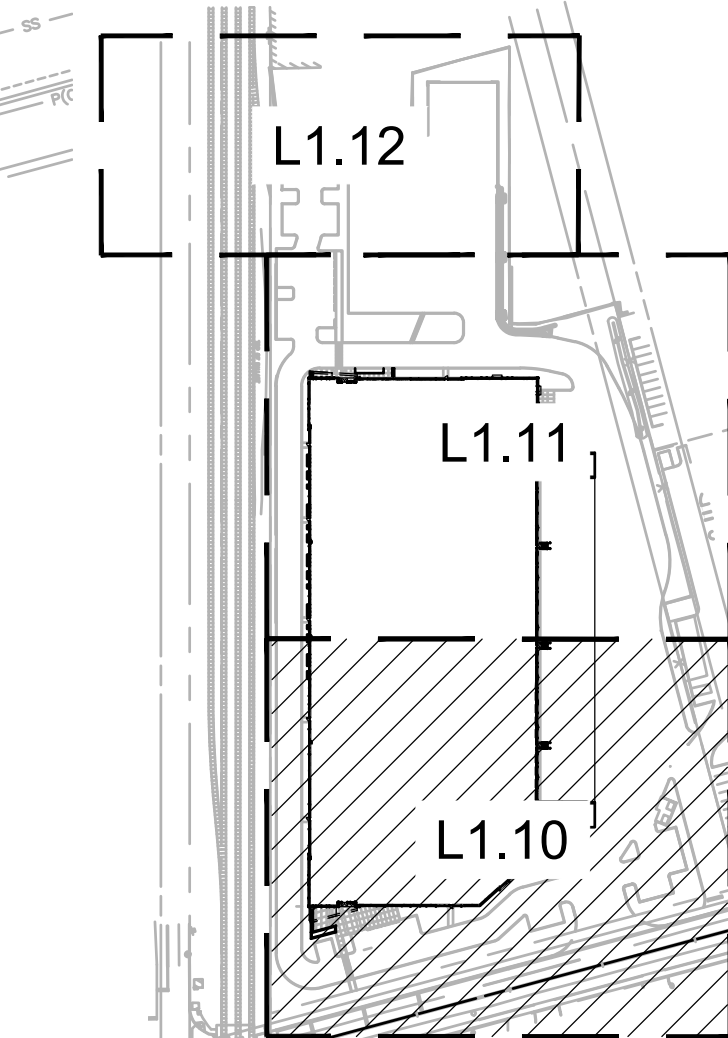
SECTION - TYPE Id LANDSCAPE @ 25 YRS

PLANTING NOTES

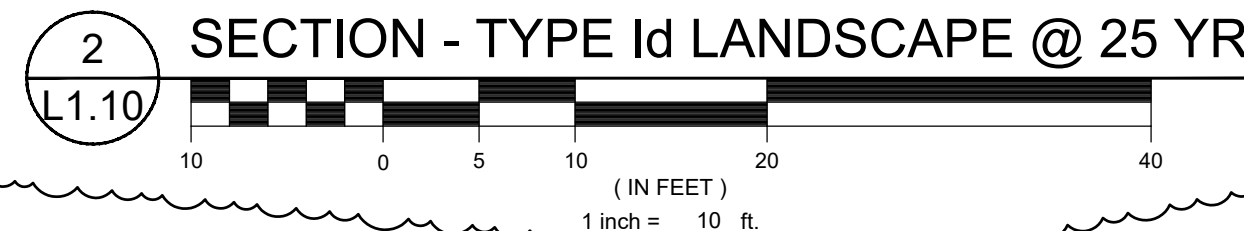
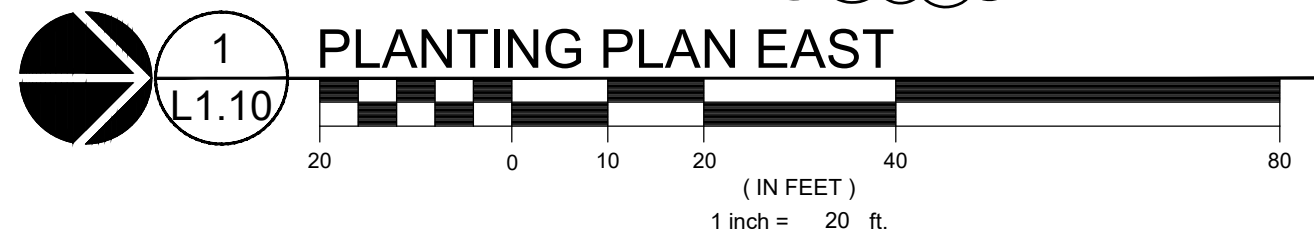
1. A MINIMUM OF EIGHT (8") INCHES OF TOP SOIL, CONTAINING TEN PERCENT DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE ORIGINAL UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES (8") EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUB SOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 6 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE. INSTALLATION OF THE EIGHT INCHES (8") OF TOP SOIL, AS DESCRIBED ABOVE, SHALL GENERALLY BE ACHIEVED BY PLACING FIVE INCHES (5") OF IMPORTED SANDY-LOAM TOP SOIL INTO PLANNED LANDSCAPE AREAS (SUB-BASE SCARIFIED FOUR INCHES (4") WITH A THREE-INCH (3") LAYER OF COMPOST TILLED INTO THE ENTIRE DEPTH.
2. ALL EXISTING TREES, PLANTS, AND ROOTS SHALL BE PROTECTED FROM DAMAGE FROM ANY CONSTRUCTION PREPARATION, REMOVAL OR INSTALLATION ACTIVITIES WITHIN AND ADJACENT TO PROJECT LIMITS.
3. SHRUBS ADJACENT TO PARKING AREAS SHALL BE PLANTED 2 FT MINIMUM AWAY FROM THE BACK OF CURB. SHRUBS AND GROUND COVER ALONG OTHER PAVEMENT EDGES SHALL BE PLANTED A MINIMUM OF ONE HALF THEIR ON CENTER SPACING AWAY FROM PAVEMENT EDGE.
4. ALL PLANT MATERIAL SHALL BE HEALTHY NURSERY STOCK, WELL BRANCHED AND ROOTED, FULL FOLIAGE, FREE FROM INSECTS, DISEASES, WEEDS, WEED ROT, INJURIES AND DEFECTS WITH NO LESS THAN MINIMUMS SPECIFIED IN AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1-2004. TREES IN THE RIGHT OF WAY SHALL BE TALL ENOUGH TO BE LIMBED UP TO AT LEAST 7 FT ABOVE FINISHED GRADE OF SIDEWALK ABUTTING PLANTING AREA WHILE MAINTAINING ENOUGH BRANCHES TO SUPPORT HEALTHY GROWTH. AS THE TREE GROWS, MAINTAIN BRANCHES OVERREACHING THE FINISHED GRADE OF PUBLIC STREETS AT A HEIGHT OF 14 FT MIN.
5. DO NOT PLANT TREES ABOVE WATERLINES, UTILITIES, OR OTHER UNDERGROUND PIPING.
6. IF DISTURBANCE IS NECESSARY AROUND EXISTING TREES, CONTRACTOR SHALL PROTECT THE CROWN AND ALL WORK WITHIN THE TREE DRIPZONE SHALL BE LIMITED TO THE USE OF HAND TOOLS AND MANUAL EQUIPMENT ONLY.
7. REPLACE, REPAIR AND RESTORE DISTURBED LANDSCAPE AREAS DUE TO GRADING, TRENCHING OR OTHER REASONS TO PRE-CONSTRUCTION CONDITION AND PROVIDE MATERIAL APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
8. EXISTING AREAS PROPOSED FOR NEW PLANT MATERIAL SHALL BE CLEARED AND LEGALLY DISPOSED UNLESS SO NOTED.
9. A SOILS ANALYSIS, BY AN INDEPENDENT SOILS TESTING LABORATORY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE, SHALL BE USED TO RECOMMEND AN APPROPRIATE PLANTING SOIL AND/OR SPECIFIED SOIL AMENDMENTS.
10. TOPSOIL SHALL BE AMENDED AS RECOMMENDED BY AN INDEPENDENT SOILS TESTING LABORATORY AND AS OUTLINED IN THE SPECIFICATION.
11. ALL PLANTING AREAS SHALL BE MULCHED WITH A UNIFORM FOUR (4") INCH LAYER OF ORGANIC COMPOST MULCH MATERIAL OR WOOD CHIPS OVER A PROPERLY CLEANED, AMENDED AND GRADED SUBSURFACE.

REFERENCE NOTES

1. PLANT SIZE, SPACING, AND QUANTITY, SEE PLANT SCHEDULE L0.01
2. EXISTING TREE TO REMAIN. DO NOT DISTURB. PROTECT IN PLACE.
3. PROPOSED UTILITY BOX. AVOID PLANTING WITHIN DEFINED ACCESS ZONE.
4. CAREFULLY EXCAVATE SHRUB PITS IN VICINITY OF EXISTING TREES, WITHOUT DISTURBING TREE ROOTS.
5. COORDINATE SHRUB LAYOUT WITH EXISTING UTILITIES, REPORT CONFLICTS TO LANDSCAPE ARCHITECT.



KEY MAP  
SCALE: NTS



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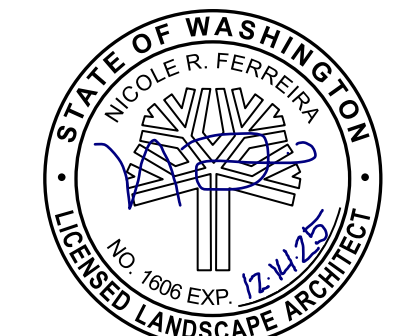
MACKENZIE  
DESIGN DRIVEN • CLIENT FOCUSED

Client  
CREF3 PUYALLUP  
OWNER LLC

11611 SAN VICENTE  
BLVD  
10TH FLOOR  
LOS ANGELES  
CA 90049

Project  
FORTRESS -  
PUYALLUP

240 15TH ST SE  
PUYALLUP, WA,  
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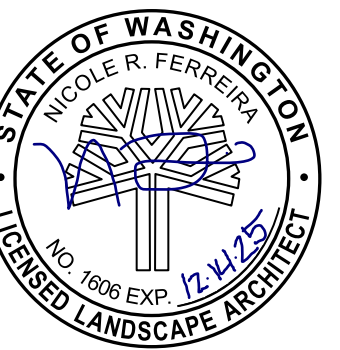
REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/28/2024

SHEET TITLE:  
PLANTING PLAN  
EAST

DRAWN BY: LJM  
CHECKED BY: NRF  
SHEET:

L1.10

JOB NO. 2220290.00



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**REFERENCE NOTES**

1. PLANT SIZE, SPACING, AND QUANTITY, SEE PLANT SCHEDULE L0.01
2. EXISTING TREE TO REMAIN. DO NOT DISTURB. PROTECT IN PLACE.
3. PROPOSED UTILITY BOX. AVOID PLANTING WITHIN DEFINED ACCESS ZONE.
4. CAREFULLY EXCAVATE SHRUB PITS IN VICINITY OF EXISTING TREES, WITHOUT DISTURBING TREE ROOTS.
5. COORDINATE SHRUB LAYOUT WITH EXISTING UTILITIES, REPORT CONFLICTS TO LANDSCAPE ARCHITECT.

REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/28/2024

SHEET TITLE:  
**PLANTING PLAN  
CENTRAL**

DRAWN BY: LJM, AEZ, JWT

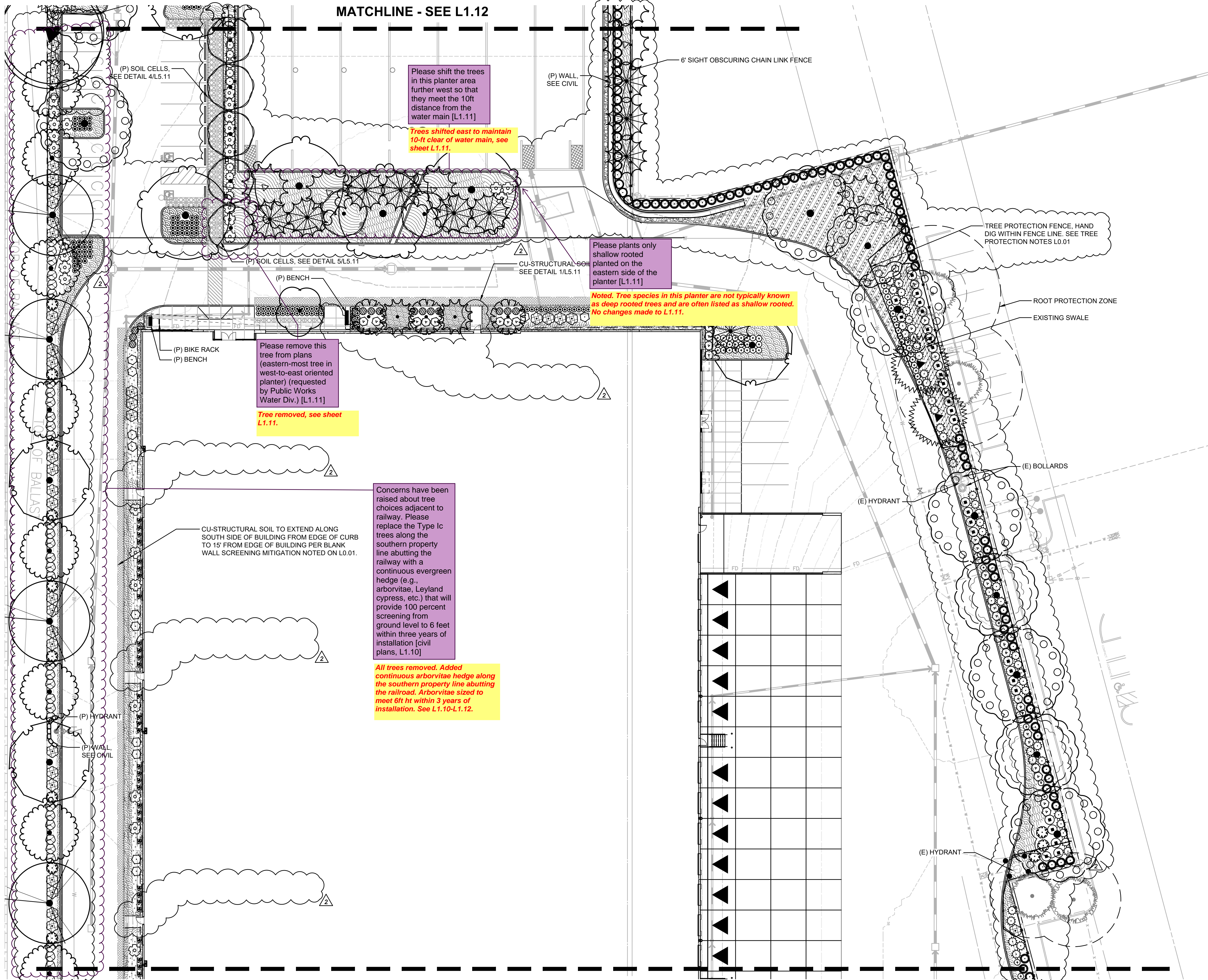
CHECKED BY: NRF

SHEET:

**L1.11**

JOB NO. **2220290.00**

**CIVIL PERMIT 12/07/2023**



MATCHLINE - SEE L1.12

MATCHLINE - SEE L1.10

Please shift the trees in this planter area further west so that they meet the 10ft distance from the water main [L1.11]

Trees shifted east to maintain 10-ft clear of water main, see sheet L1.11.

Please plants only shallow rooted planted on the eastern side of the planter [L1.11]

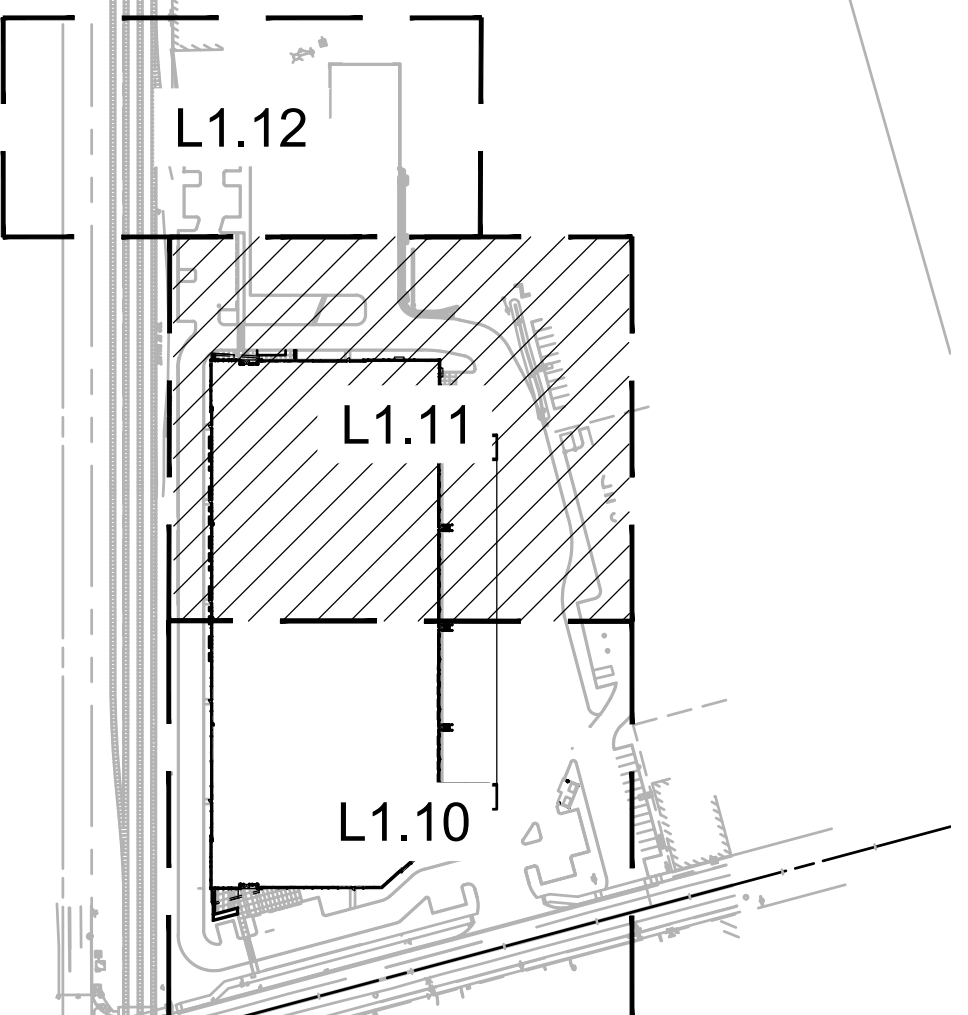
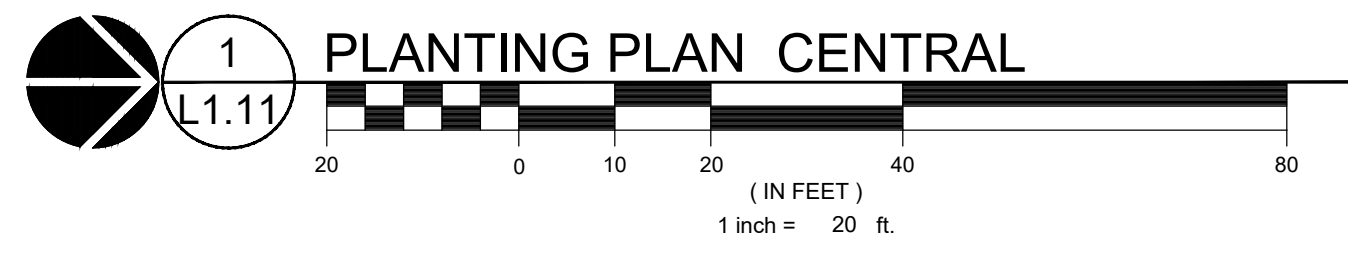
Noted. Tree species in this planter are not typically known as deep rooted trees and are often listed as shallow rooted. No changes made to L1.11.

Please remove this tree from plans (eastern-most tree in west-to-east oriented planter) (requested by Public Works Water Div.) [L1.11]

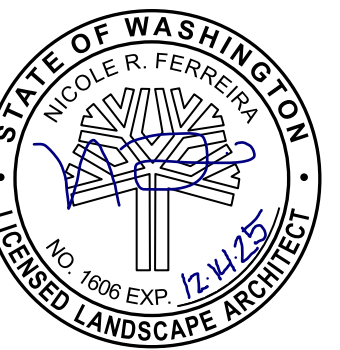
Tree removed, see sheet L1.11.

Concerns have been raised about tree choices adjacent to railway. Please replace the Type Ic trees along the southern property line abutting the railway with a continuous evergreen hedge (e.g., arborvitae, Leyland cypress, etc.) that will provide 100 percent screening from ground level to 6 feet within three years of installation [civil plans, L1.10]

All trees removed. Added continuous arborvitae hedge along the southern property line abutting the railroad. Arborvitae sized to meet 6ft ht within 3 years of installation. See L1.10-L1.12.



**KEY MAP**  
SCALE: NTS



**REFERENCE NOTES**

1. PLANT SIZE, SPACING, AND QUANTITY, SEE PLANT SCHEDULE L0.01
2. COORDINATE SHRUB LAYOUT WITH EXISTING UTILITIES, REPORT CONFLICTS TO LANDSCAPE ARCHITECT.

REVISION SCHEDULE		
Delta	Issued As	Issue Date
2	PLAN CHECK	02/28/2024

SHEET TITLE:  
**PLANTING PLAN  
WEST**

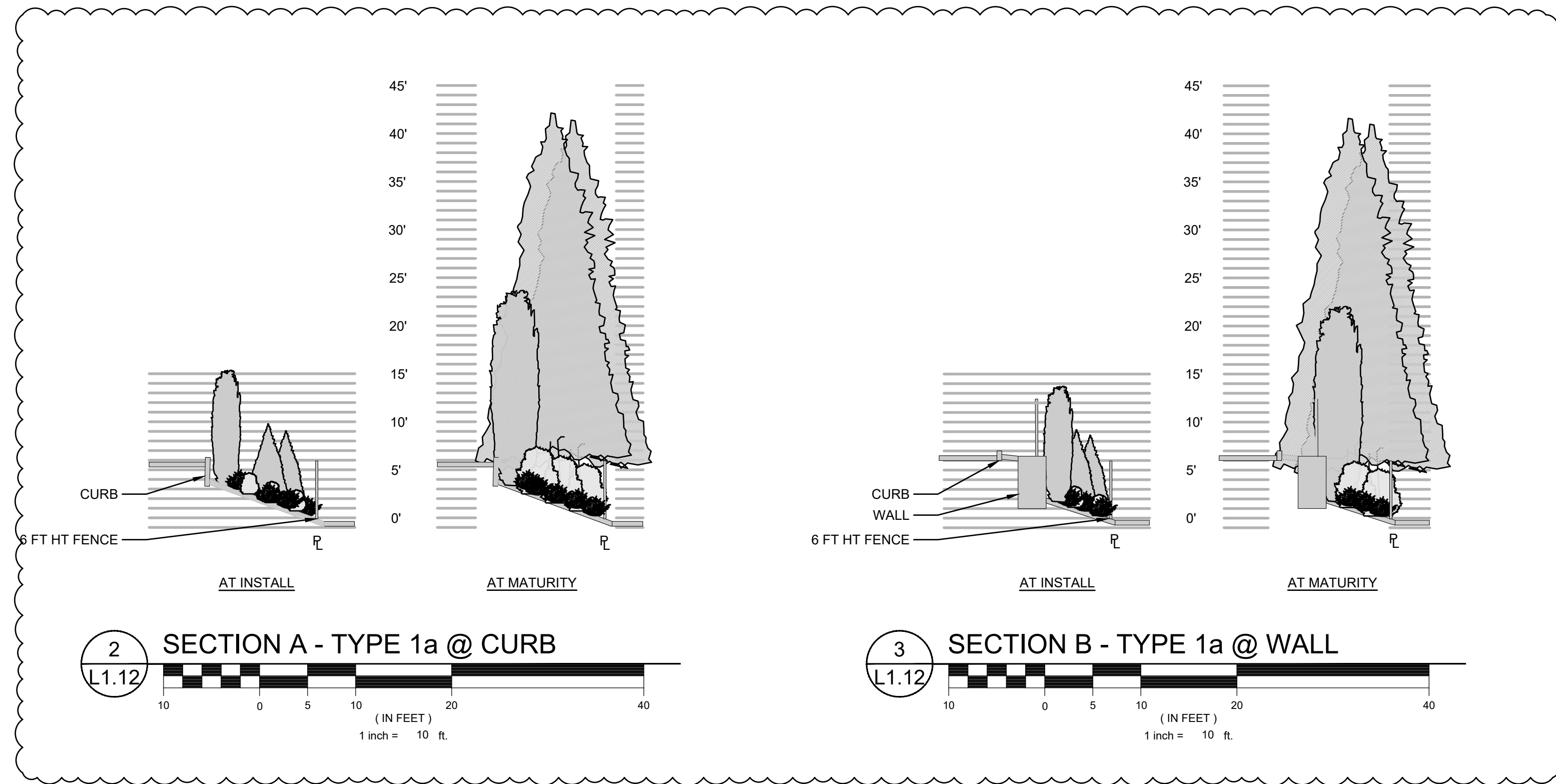
DRAWN BY: LJM, JWT

CHECKED BY: NRF

SHEET:

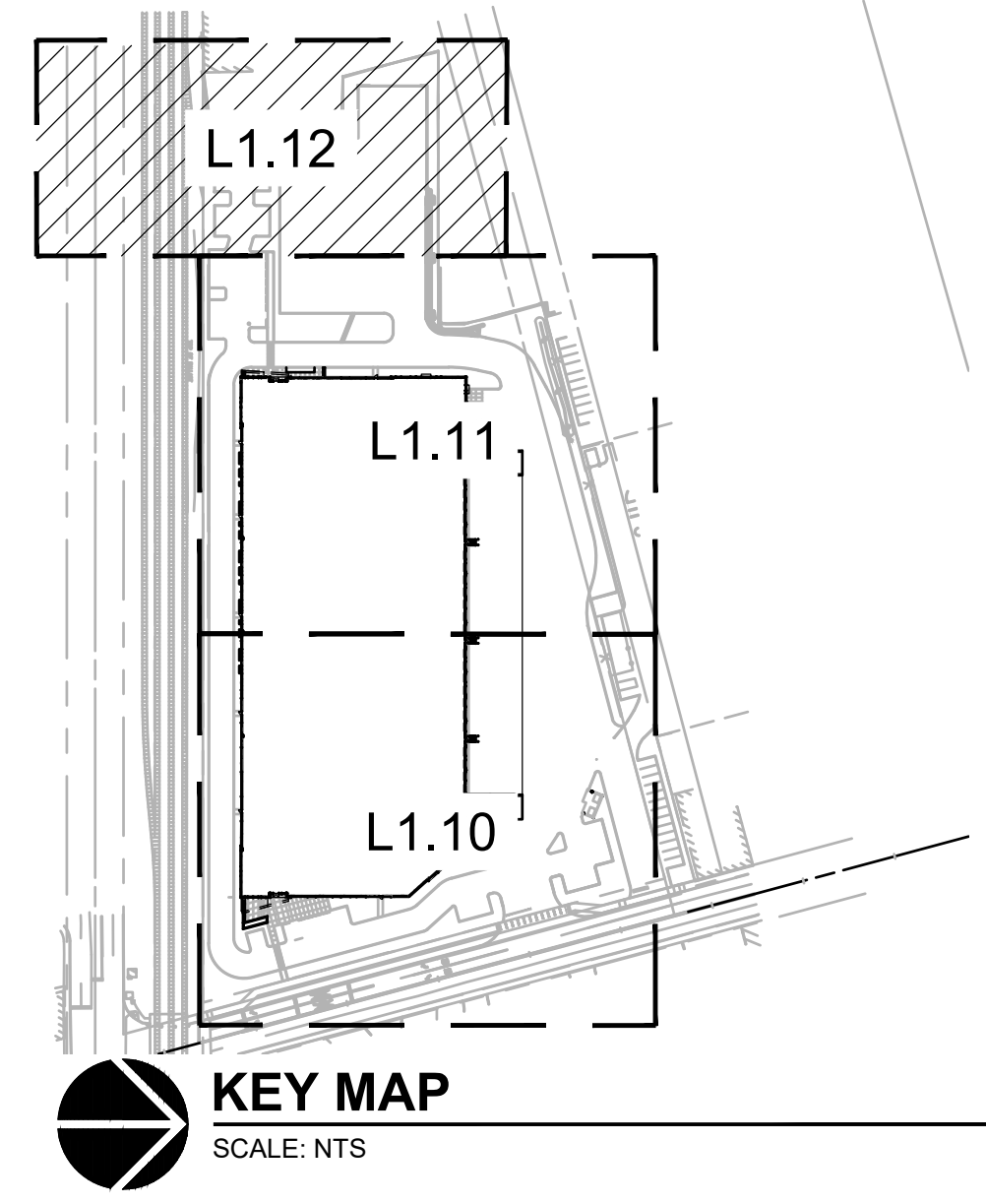
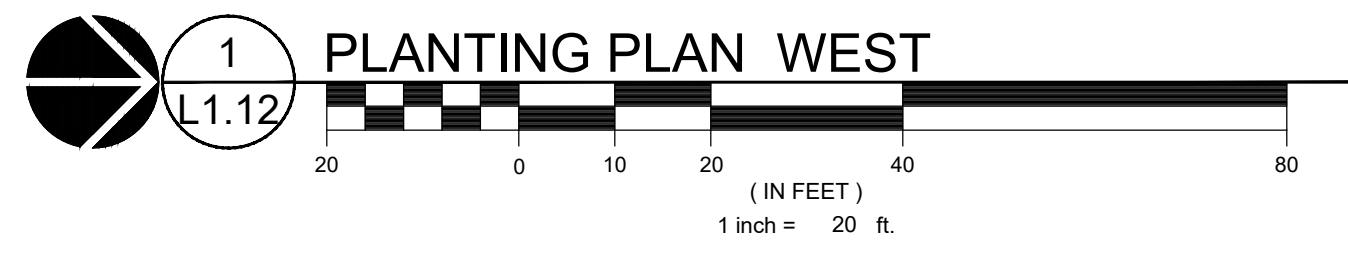
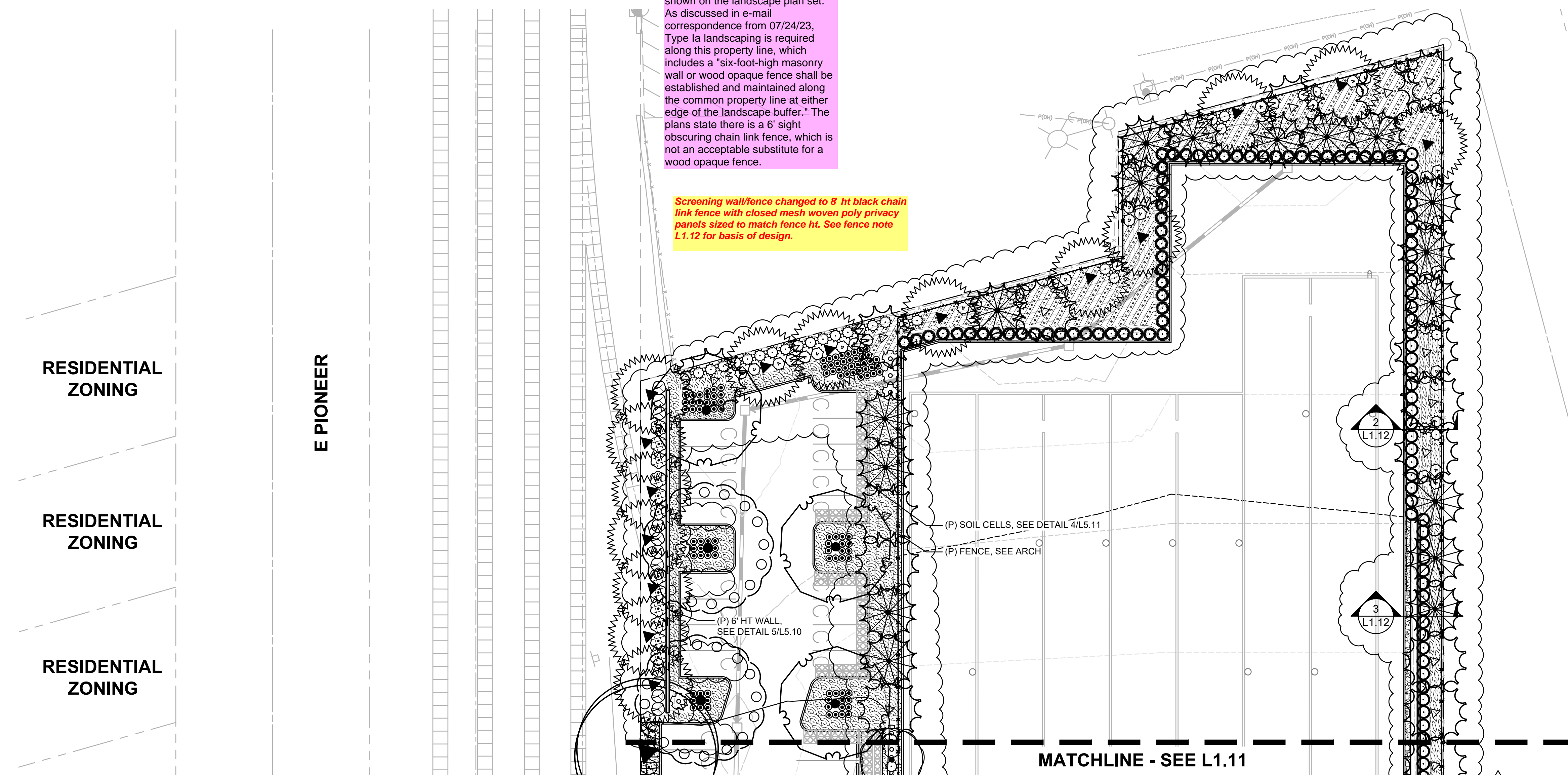
**L1.12**

JOB NO. **2220290.00**



Please provide details for the fence shown on the landscape plan set. As discussed in e-mail correspondence from 07/24/23, Type 1a landscaping is required along this property line, which includes a "six-foot-high masonry wall or wood opaque fence shall be established and maintained along the common property line at either edge of the landscape buffer." The plans state there is a 6' sight obscuring chain link fence, which is not an acceptable substitute for a wood opaque fence.

Screening wall/fence changed to 8 ht black chain link fence with closed mesh woven poly privacy panels sized to match fence ht. See fence note L1.12 for basis of design.







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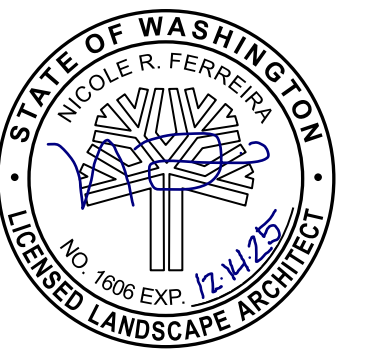
DESIGN DRIVEN | CLIENT FOCUSED

Client  
**CREF3 PUYALLUP  
OWNER LLC**

11611 SAN VICENTE  
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CA 90049

Project  
**FORTRESS -  
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**REFERENCE NOTES**

1. PLANT SIZE, SPACING, AND QUANTITY, SEE PLANT SCHEDULE L0.01
2. EXISTING TREE TO REMAIN. DO NOT DISTURB. PROTECT IN PLACE.
3. PROPOSED UTILITY BOX. AVOID PLANTING WITHIN DEFINED ACCESS ZONE.
4. CAREFULLY EXCAVATE SHRUB PITS IN VICINITY OF EXISTING TREES, WITHOUT DISTURBING TREE ROOTS.
5. COORDINATE SHRUB LAYOUT WITH EXISTING UTILITIES, REPORT CONFLICTS TO LANDSCAPE ARCHITECT.

REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023

SHEET TITLE:  
**LAYOUT AND  
MATERIALS  
PLAN**

DRAWN BY: AEZ, JWT

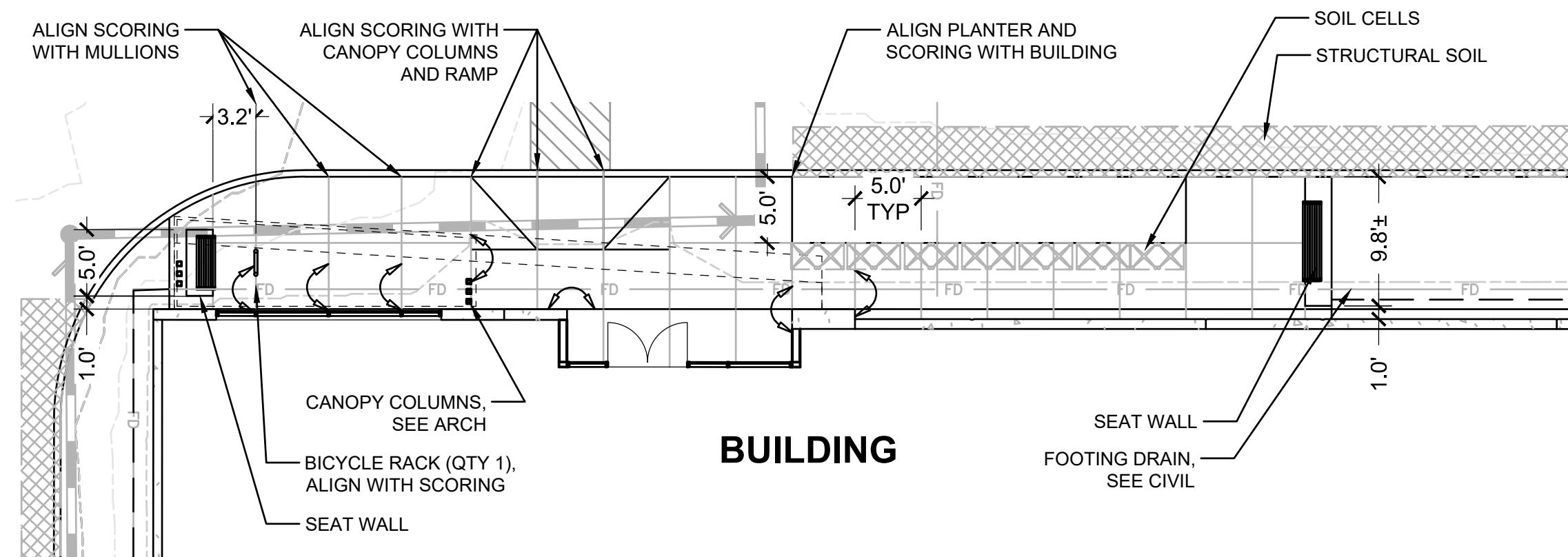
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SHEET:

**L1.20**

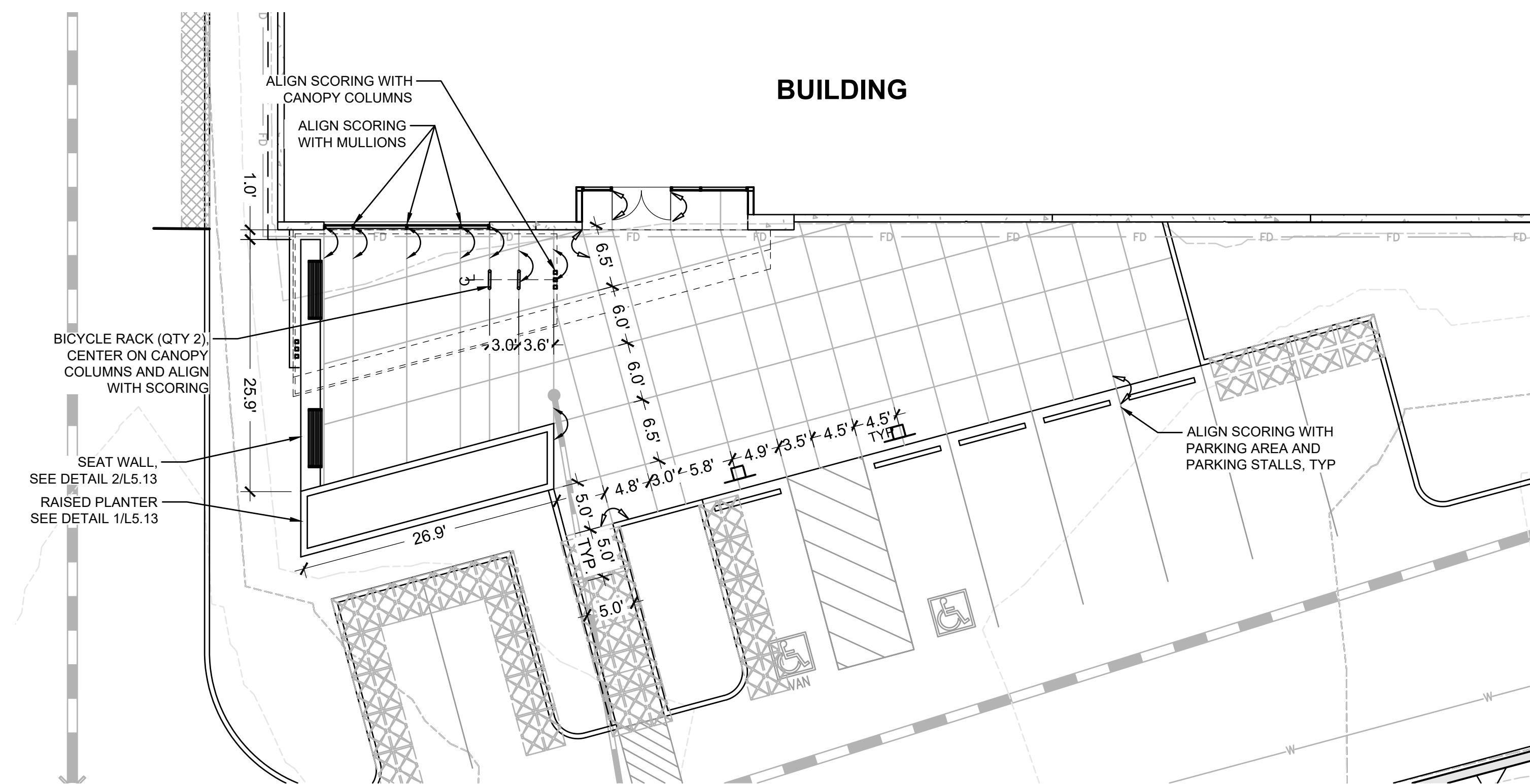
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**CIVIL PERMIT 12/07/2023**  
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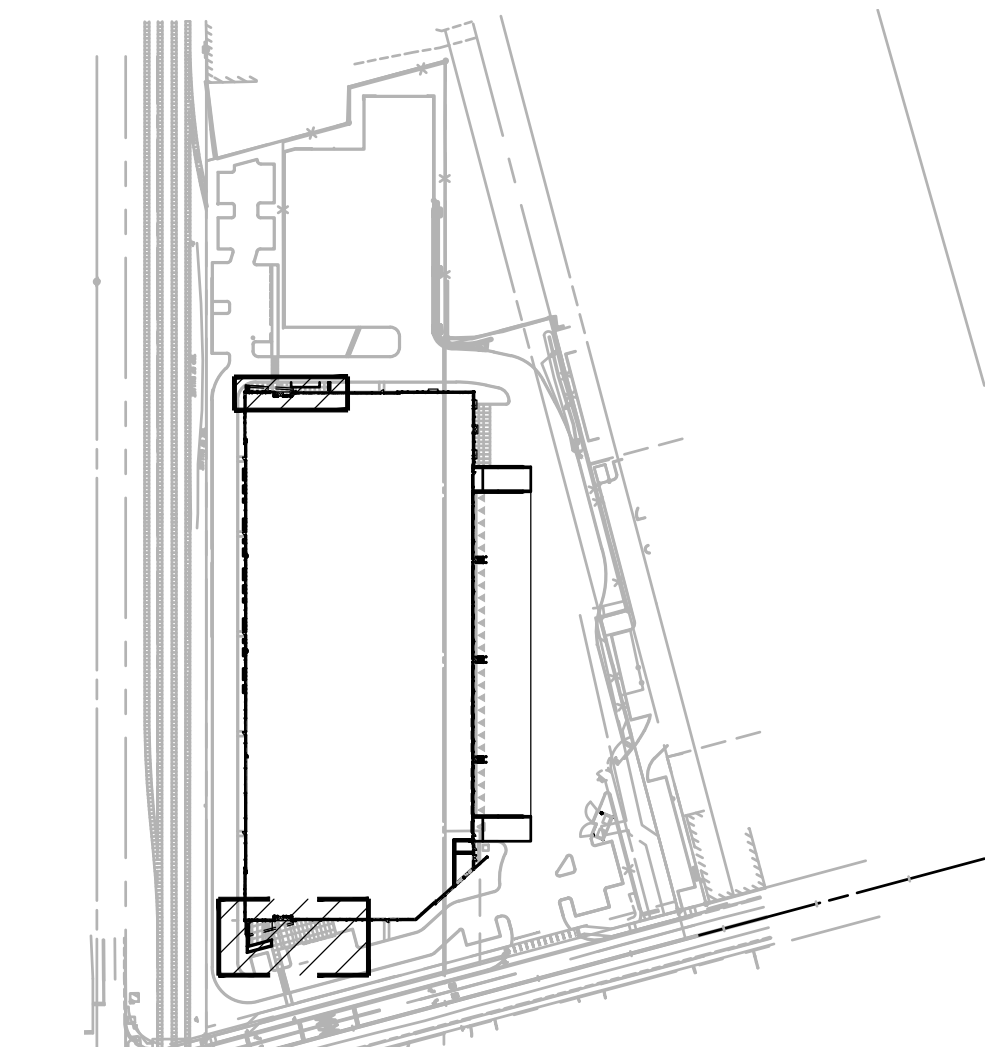
**1 LAYOUT PLAN**  
L1.20

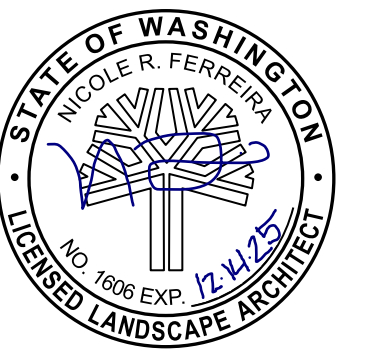
(IN FEET)  
1 inch = 20 ft.



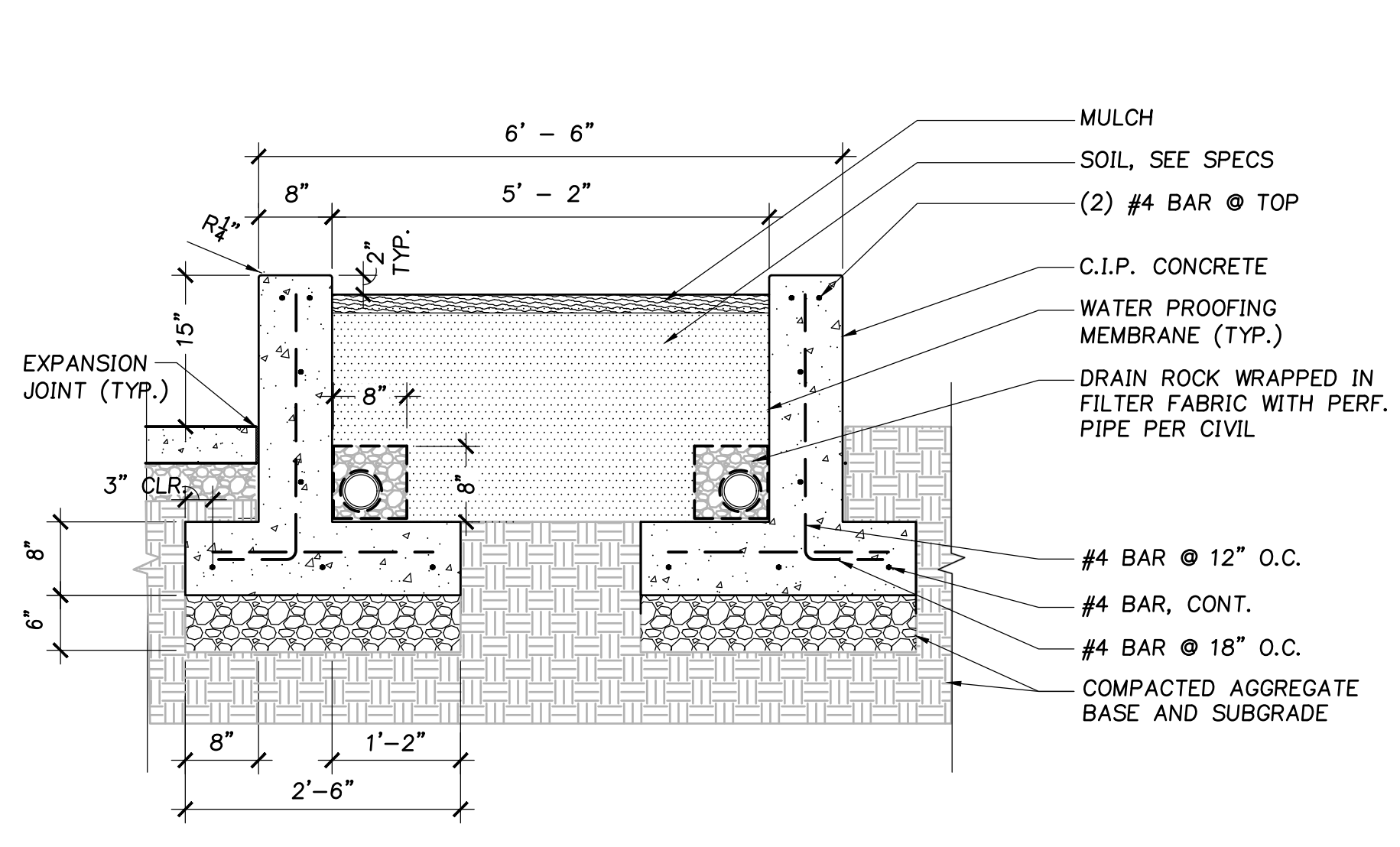
**1 MATERIALS AND LAYOUT PLAN**  
L1.20

(IN FEET)  
1 inch = 20 ft.

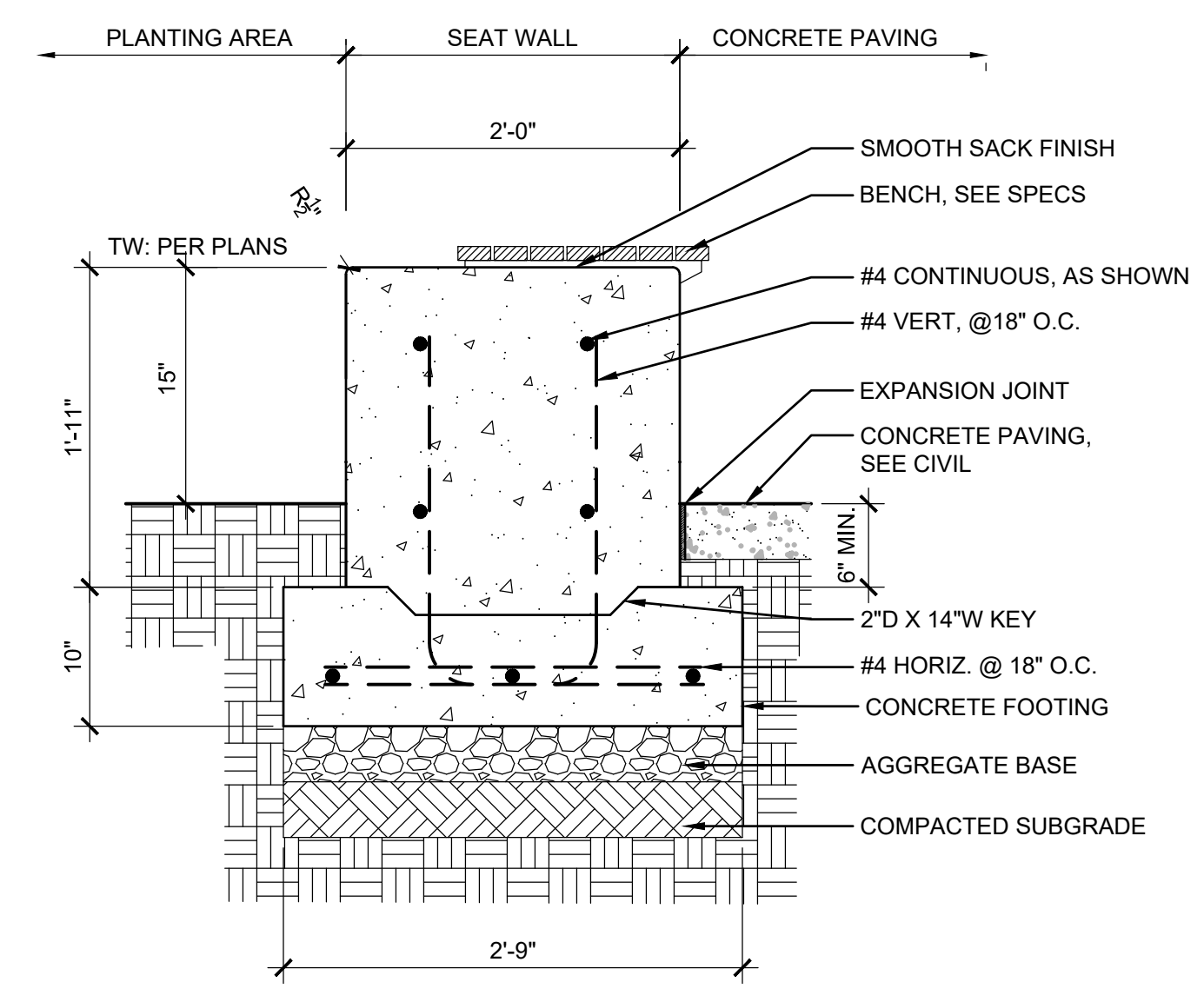




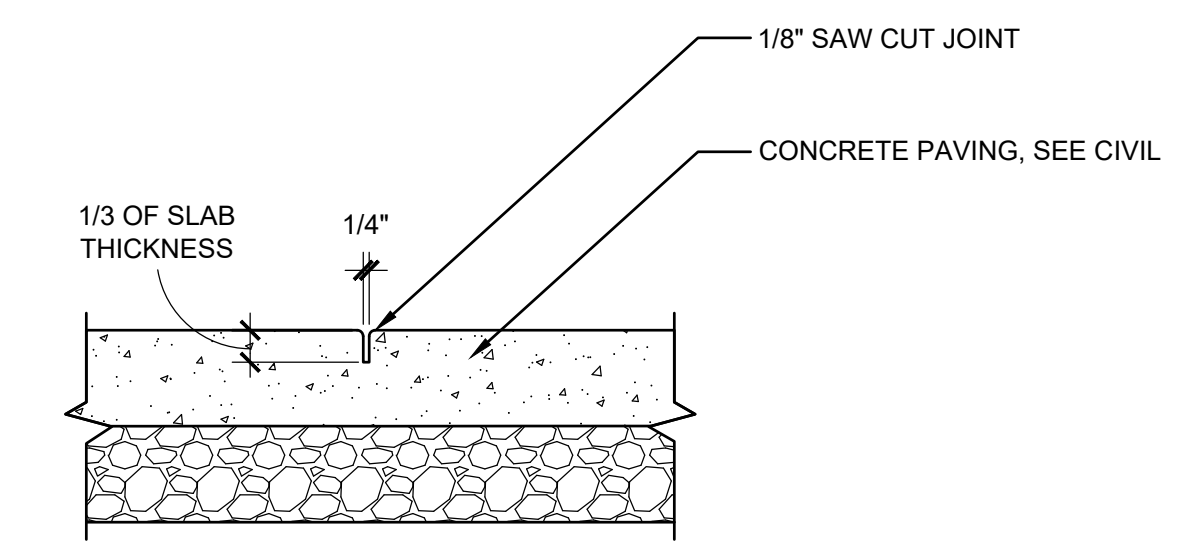
REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/28/2024



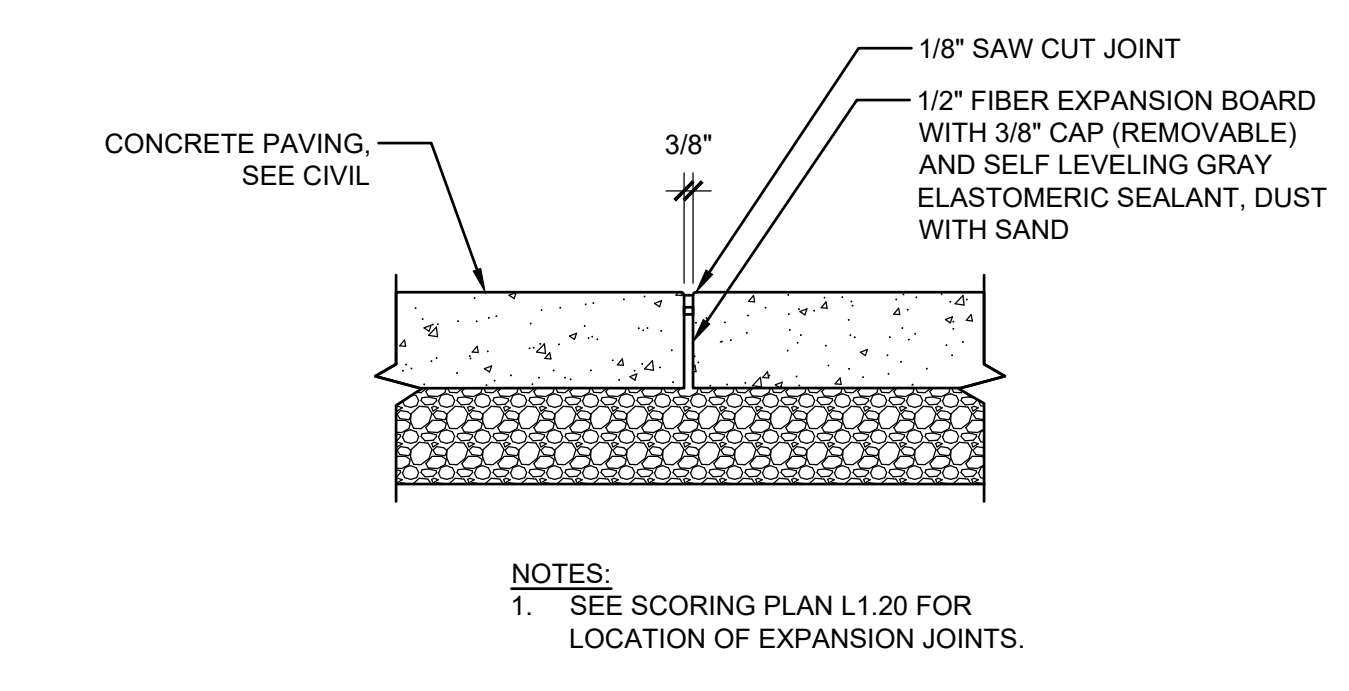
**1 C.I.P. PLANTER**  
SECTION  
SCALE: NTS



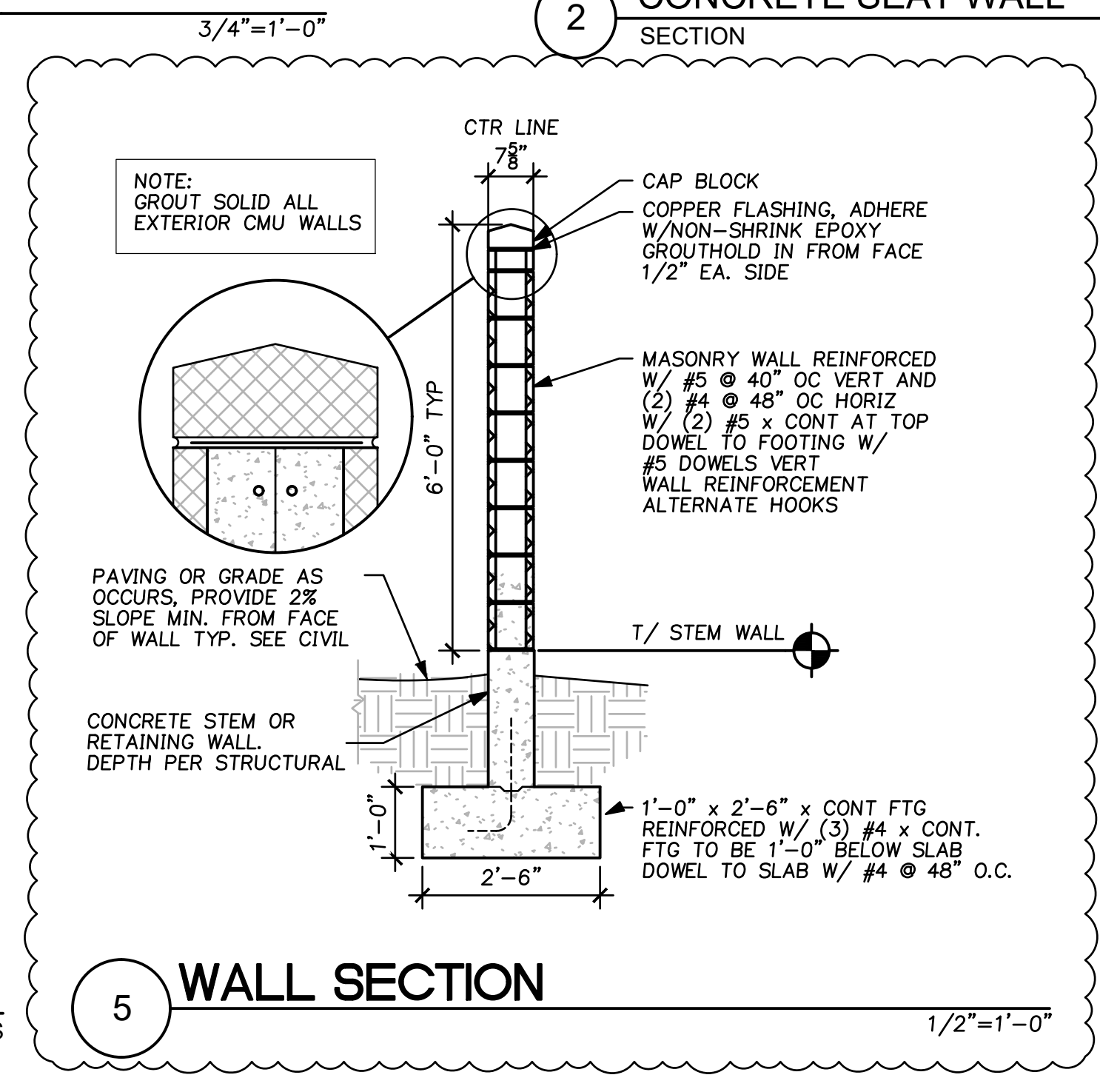
**2 CONCRETE SEAT WALL**  
SECTION  
SCALE: NTS



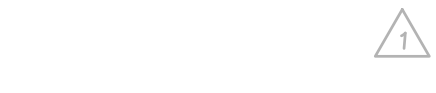
**3 CONTRACTION JOINT (CJ)**  
SECTION  
SCALE: NTS

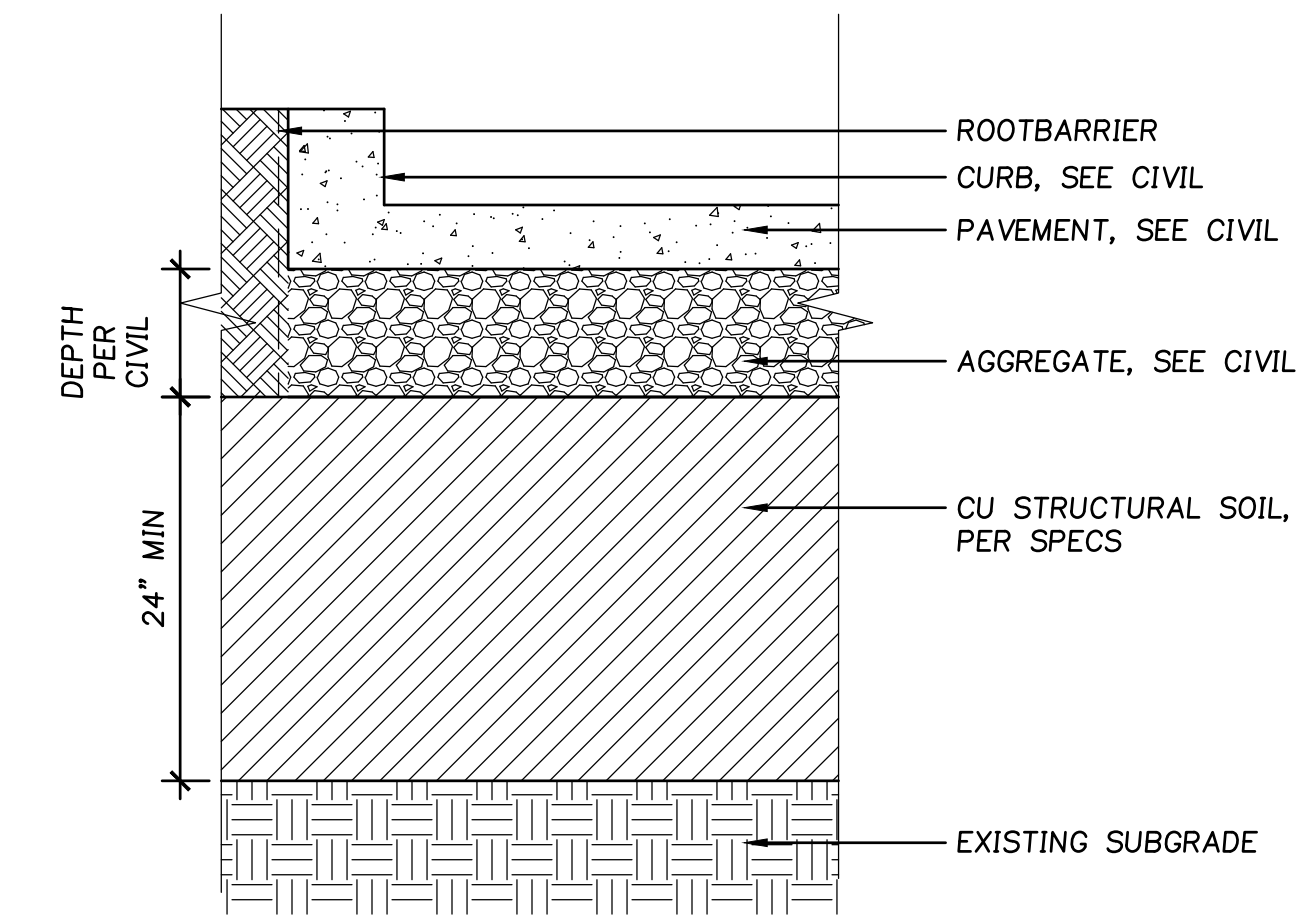


**4 EXPANSION JOINT (EJ)**  
SECTION  
SCALE: NTS

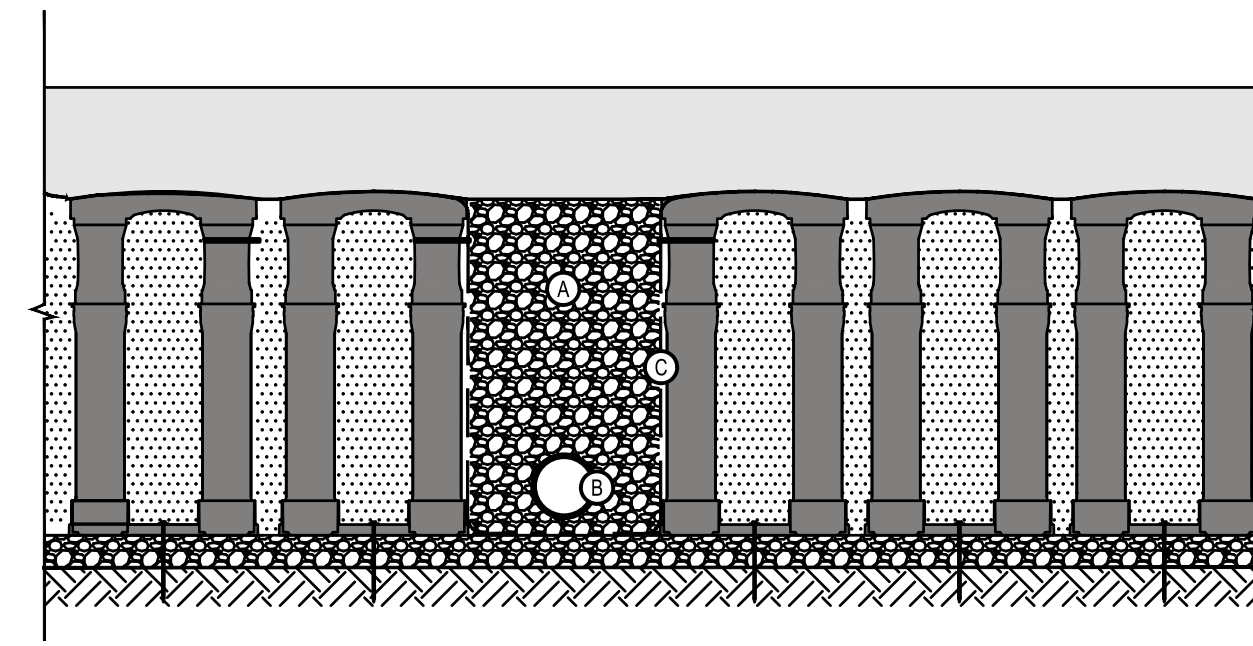


**5 WALL SECTION**  
SECTION  
SCALE: NTS

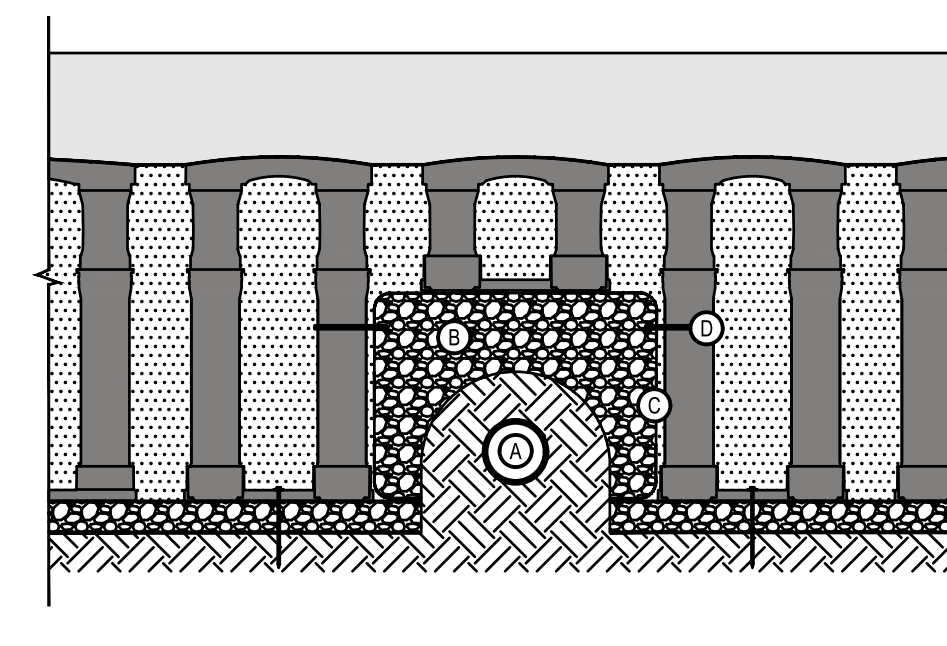




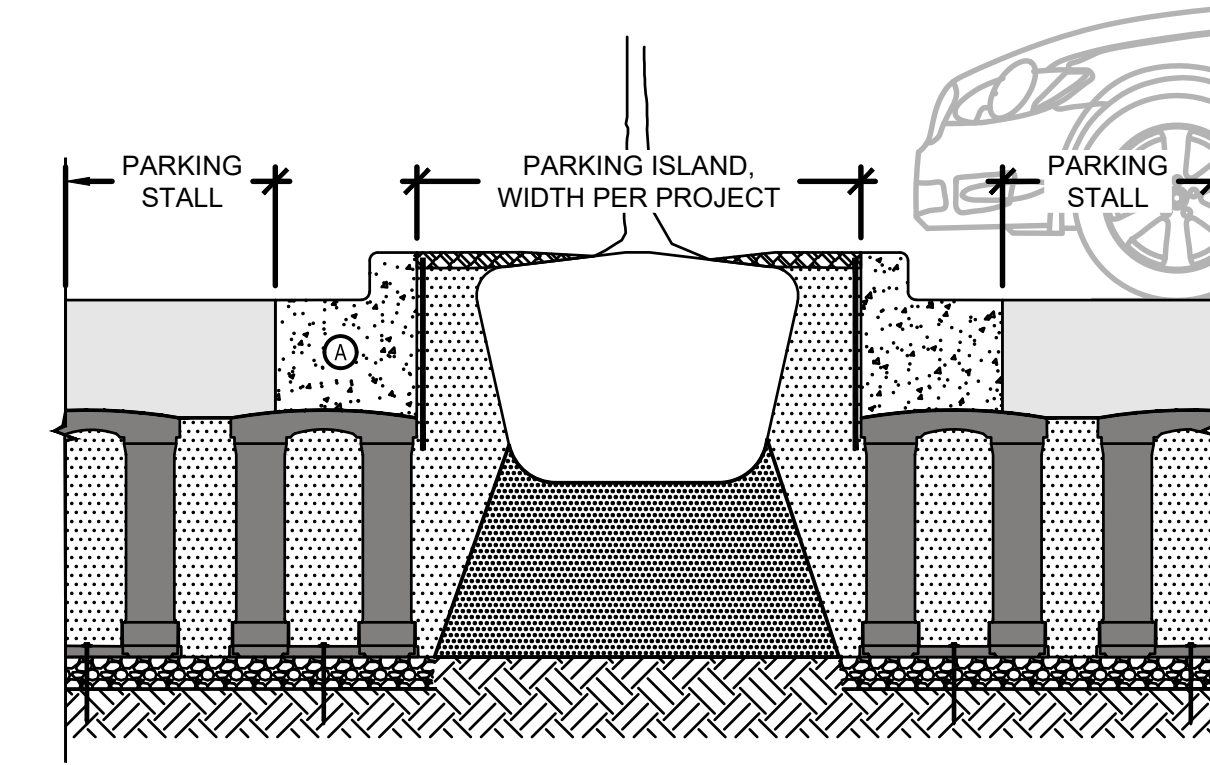
**1** CU-STRUCTURAL SOIL  
SCALE: NTS



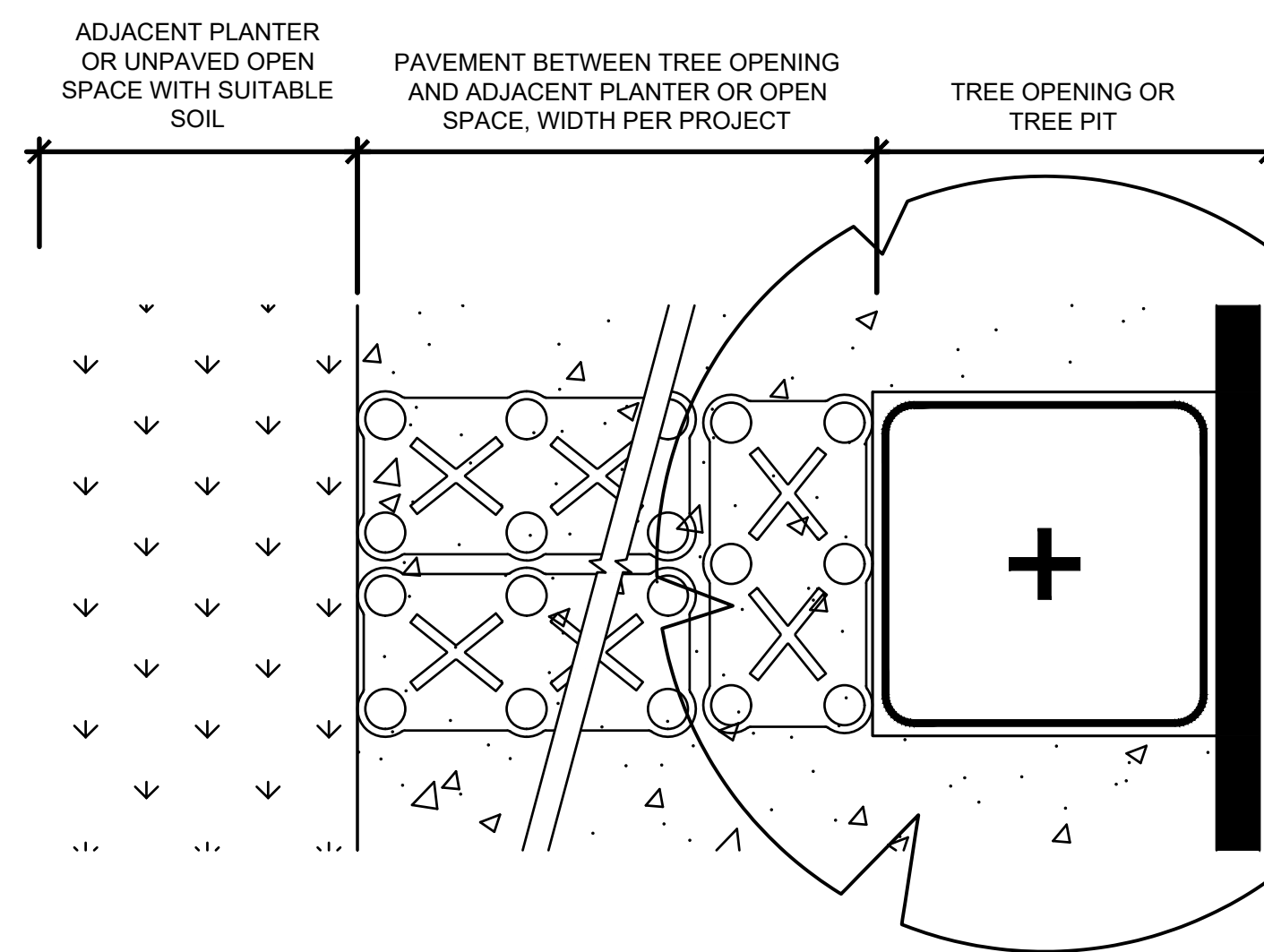
**2** BRIDGING WITH AGGREGATE  
SOIL CELL  
SCALE: NTS



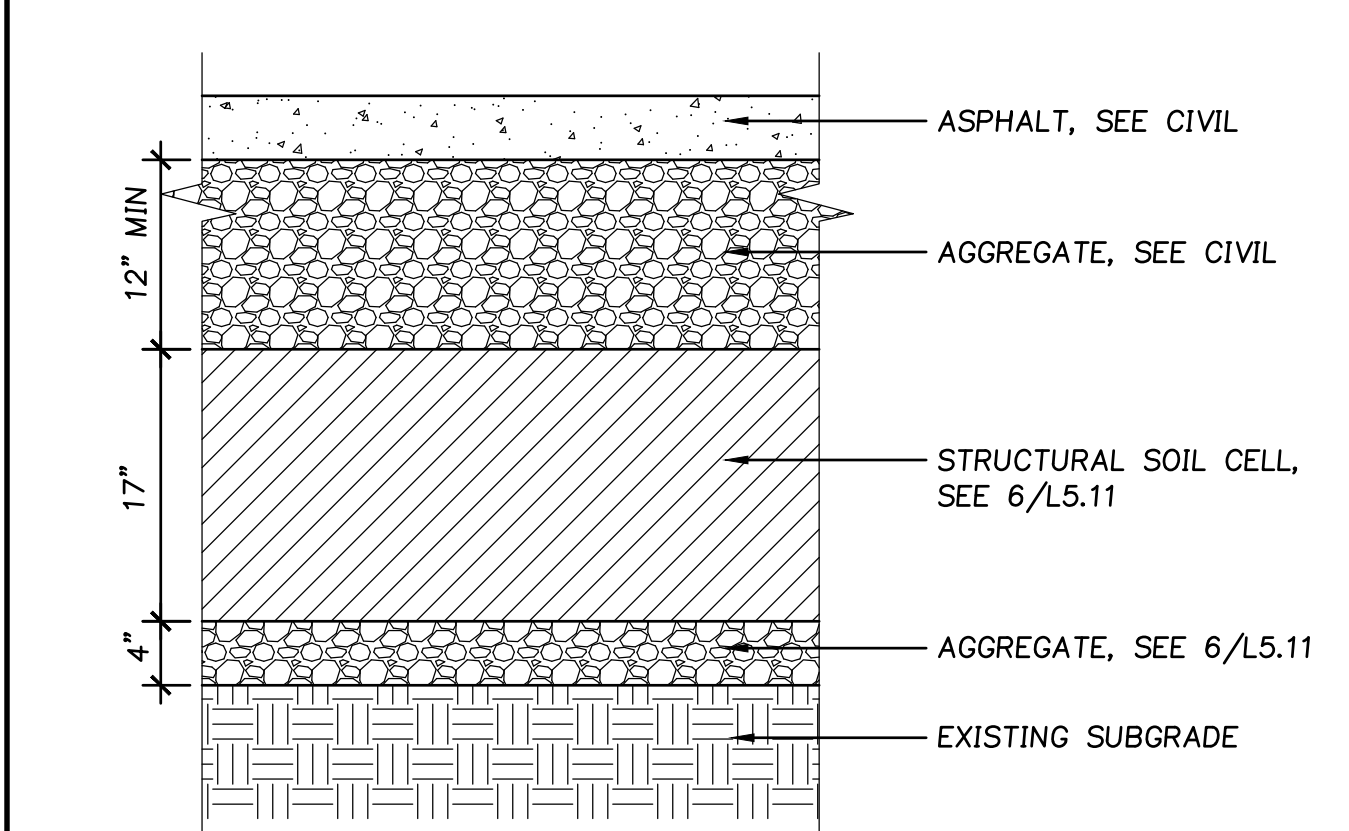
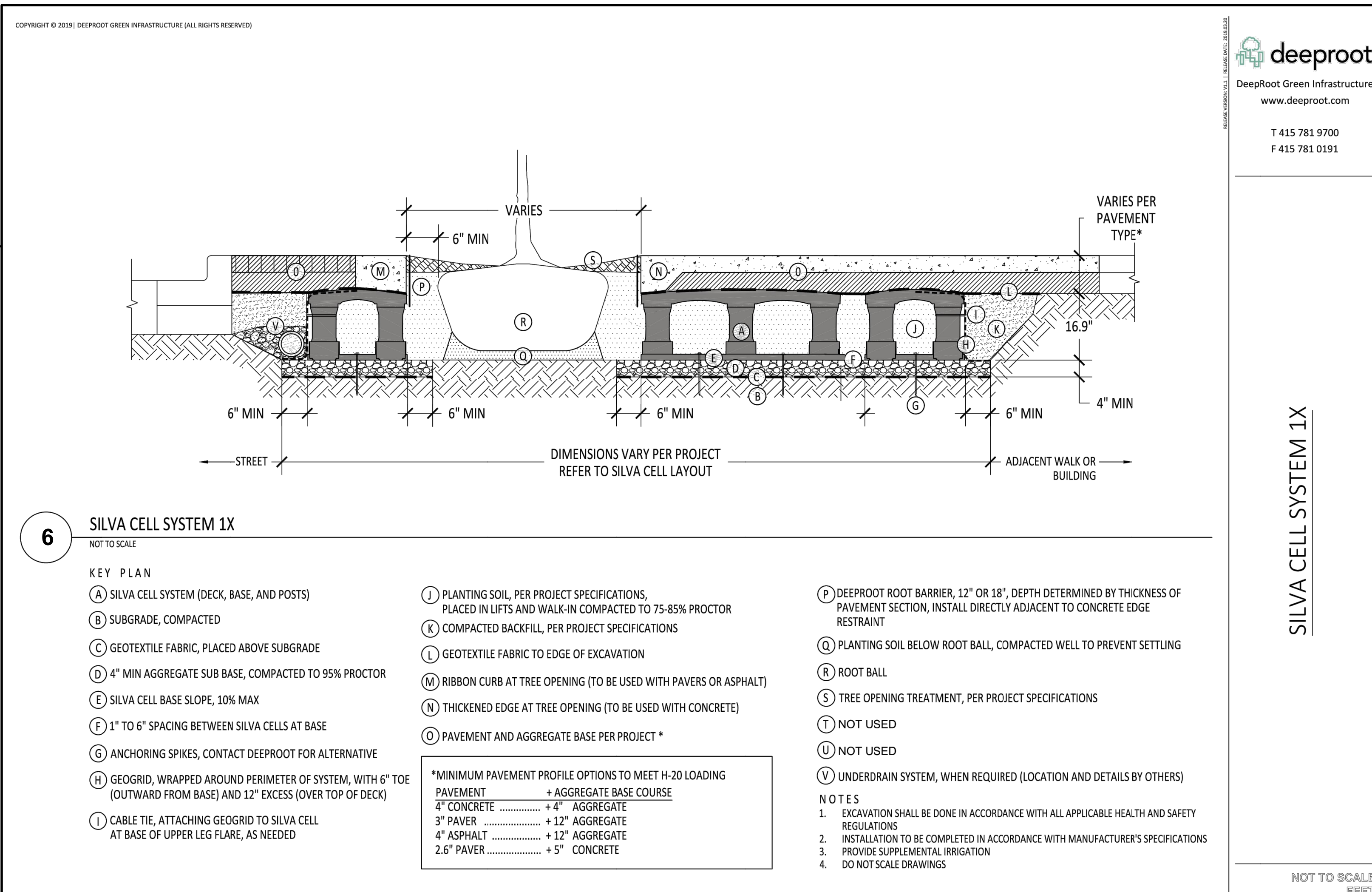
**3** BRIDGING OVER UTILITIES  
SOIL CELL  
SCALE: NTS



**4** PARKING BAY  
SOIL CELL  
SCALE: NTS



**5** BREAKOUT ZONE  
SOIL CELL  
SCALE: NTS

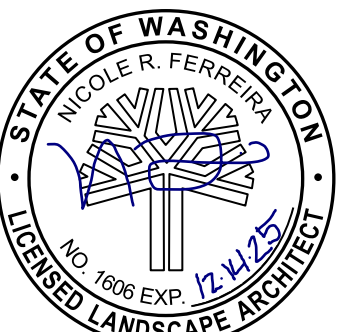


**7** SOIL CELLS AT PAVEMENT  
SCALE: NTS

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LOS ANGELES CA 90049

Project  
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REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023

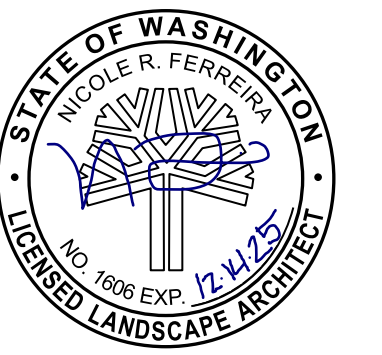
SHEET TITLE:  
**SOIL DETAILS**

DRAWN BY: LJM  
CHECKED BY: NRF  
SHEET:

**L5.11**

JOB NO. **2220290.00**

CIVIL PERMIT 12/07/2023

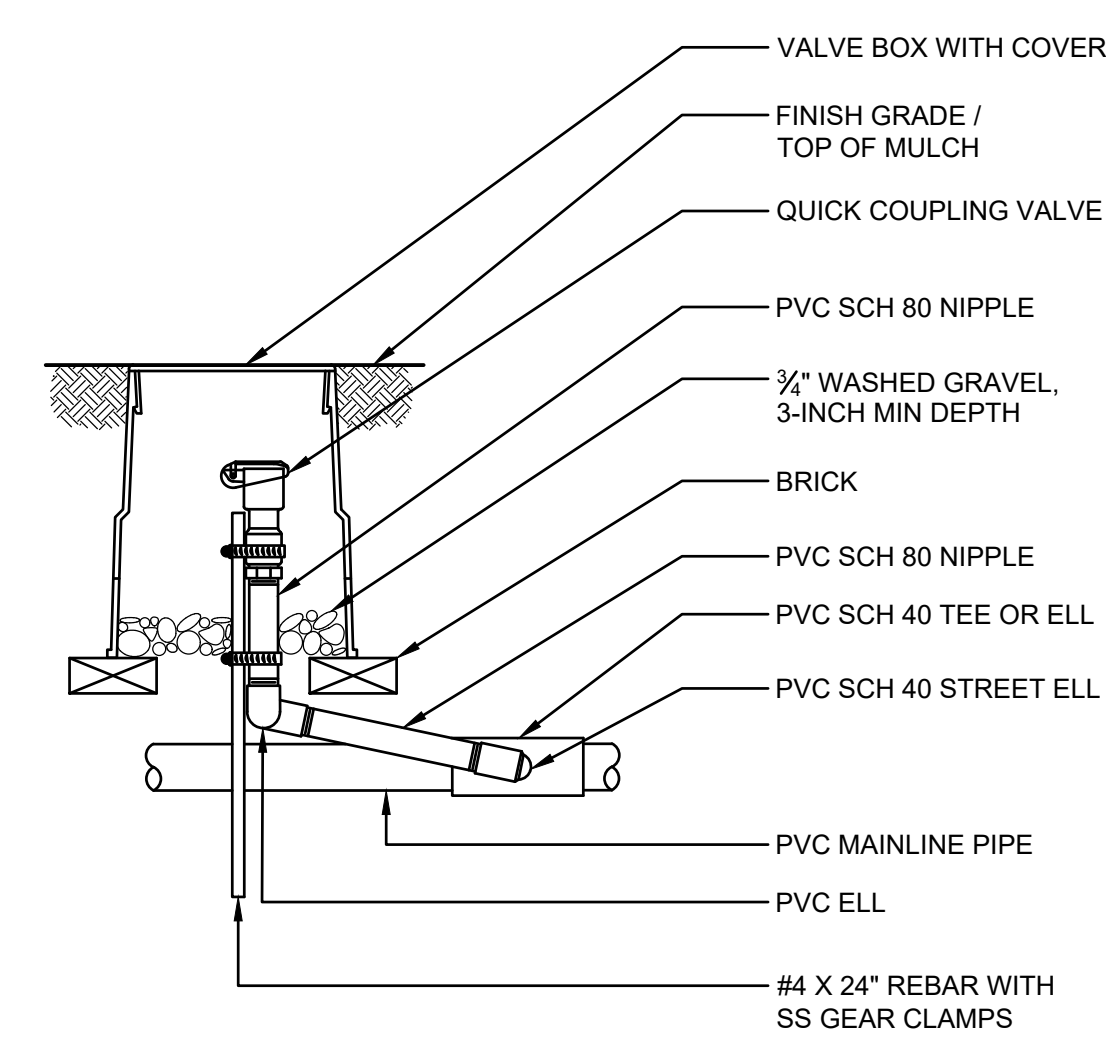


REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023

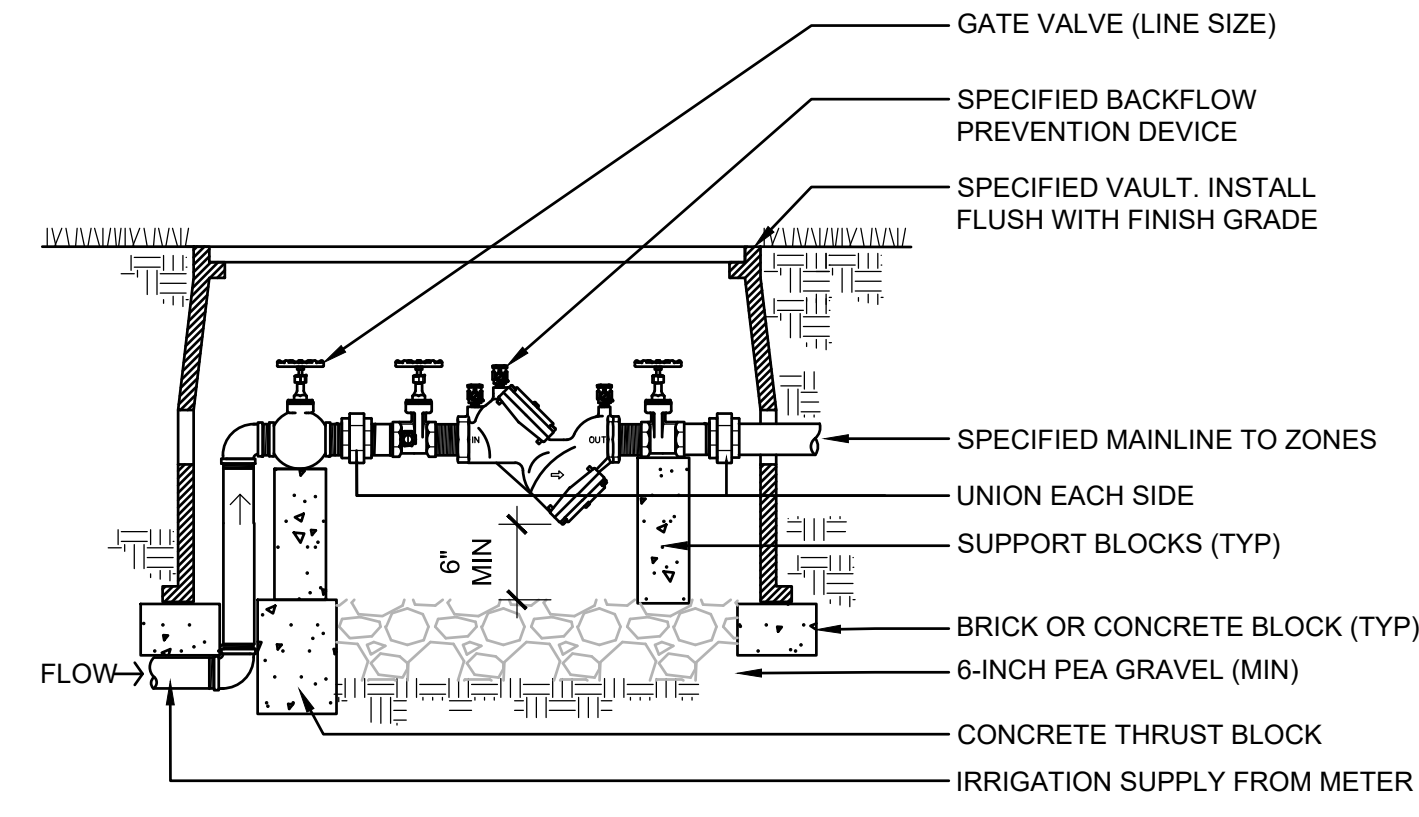
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**IRRIGATION  
DETAILS**

DRAWN BY: LJM  
CHECKED BY: NRF  
SHEET:

**L5.12**

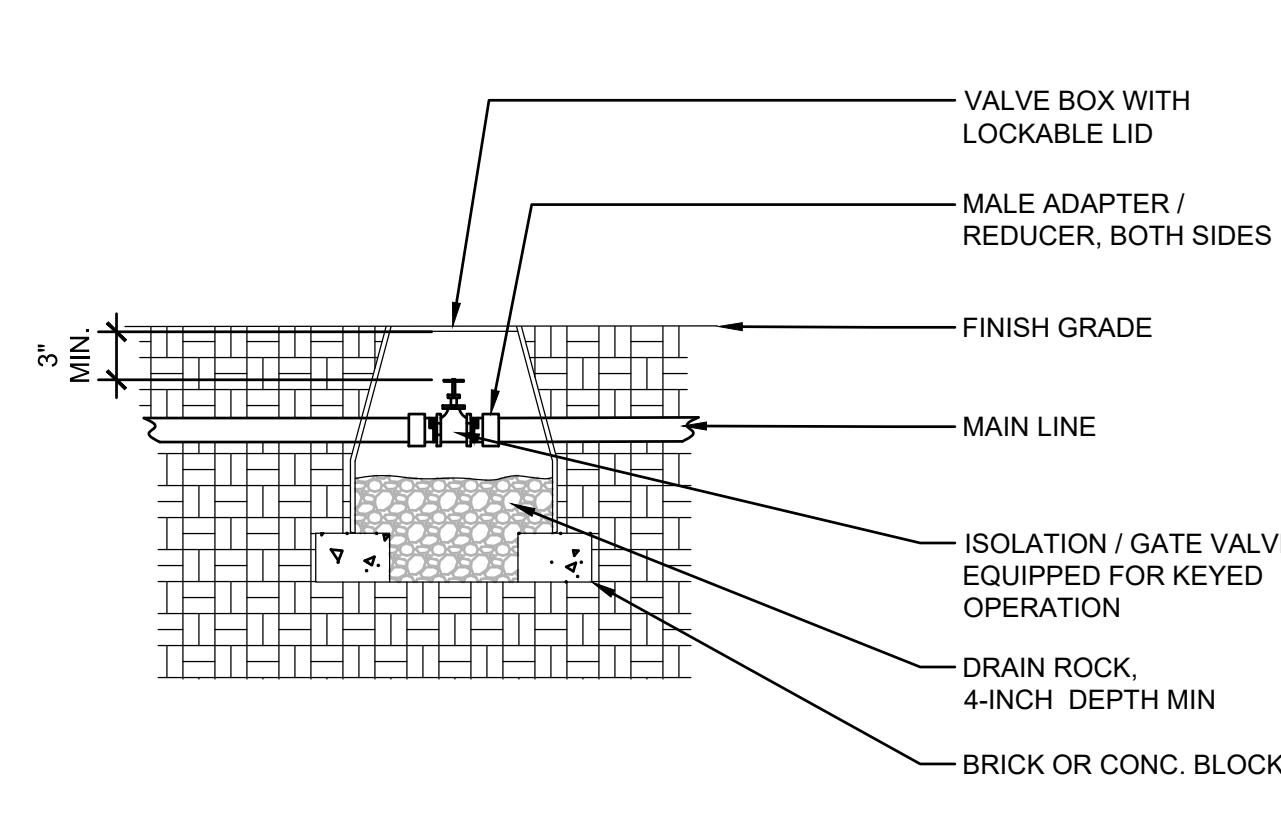


**4 QUICK COUPLER VALVE** SCALE: NTS



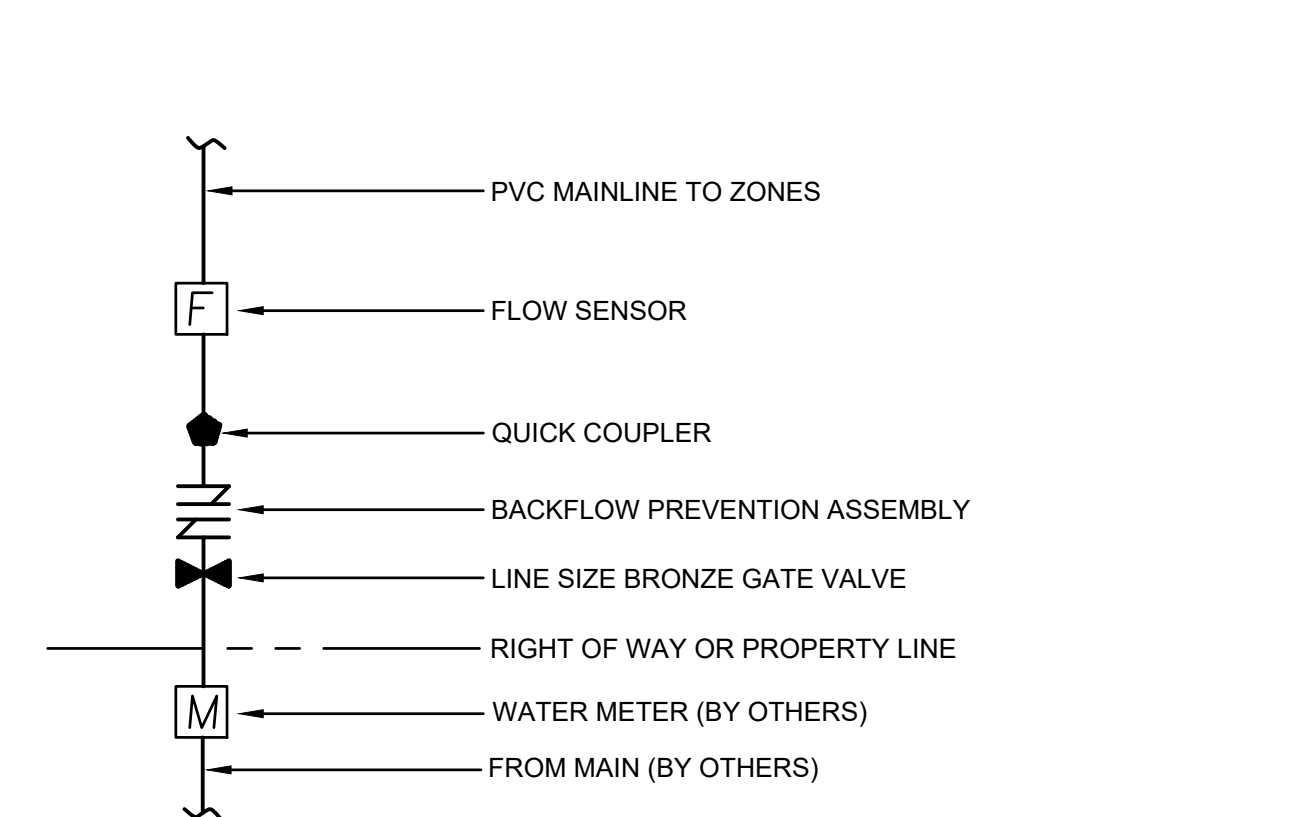
NOTE:  
INSTALL BACKFLOW PREVENTOR PER CODE AND REQUIREMENTS OF PREVAILING JURISDICTIONS.

**3 DOUBLE CHECK VALVE** SCALE: NTS

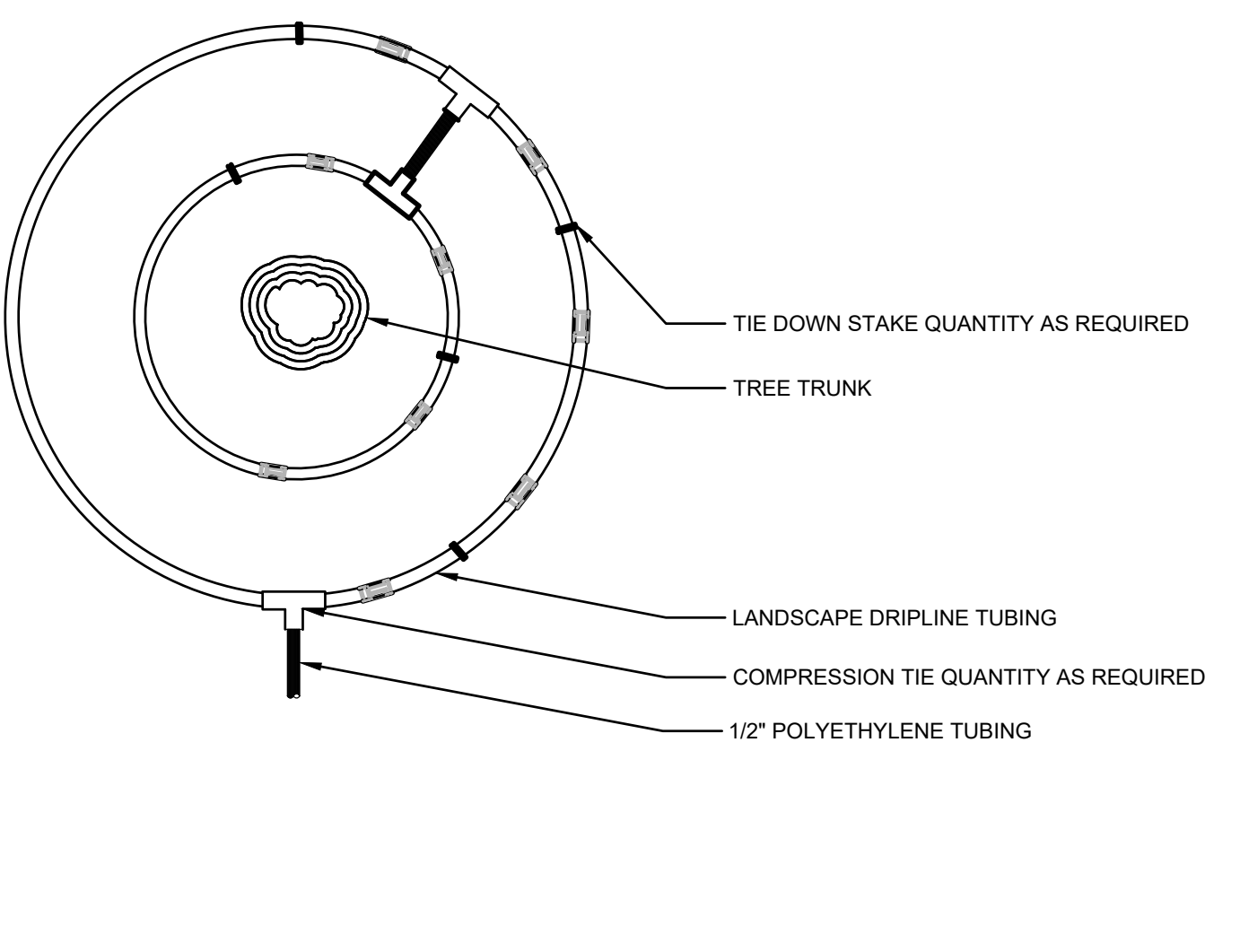


NOTES:  
1. PVC ADAPTER AND FITTINGS TO BE SAME SIZE AS ISOLATION VALVE

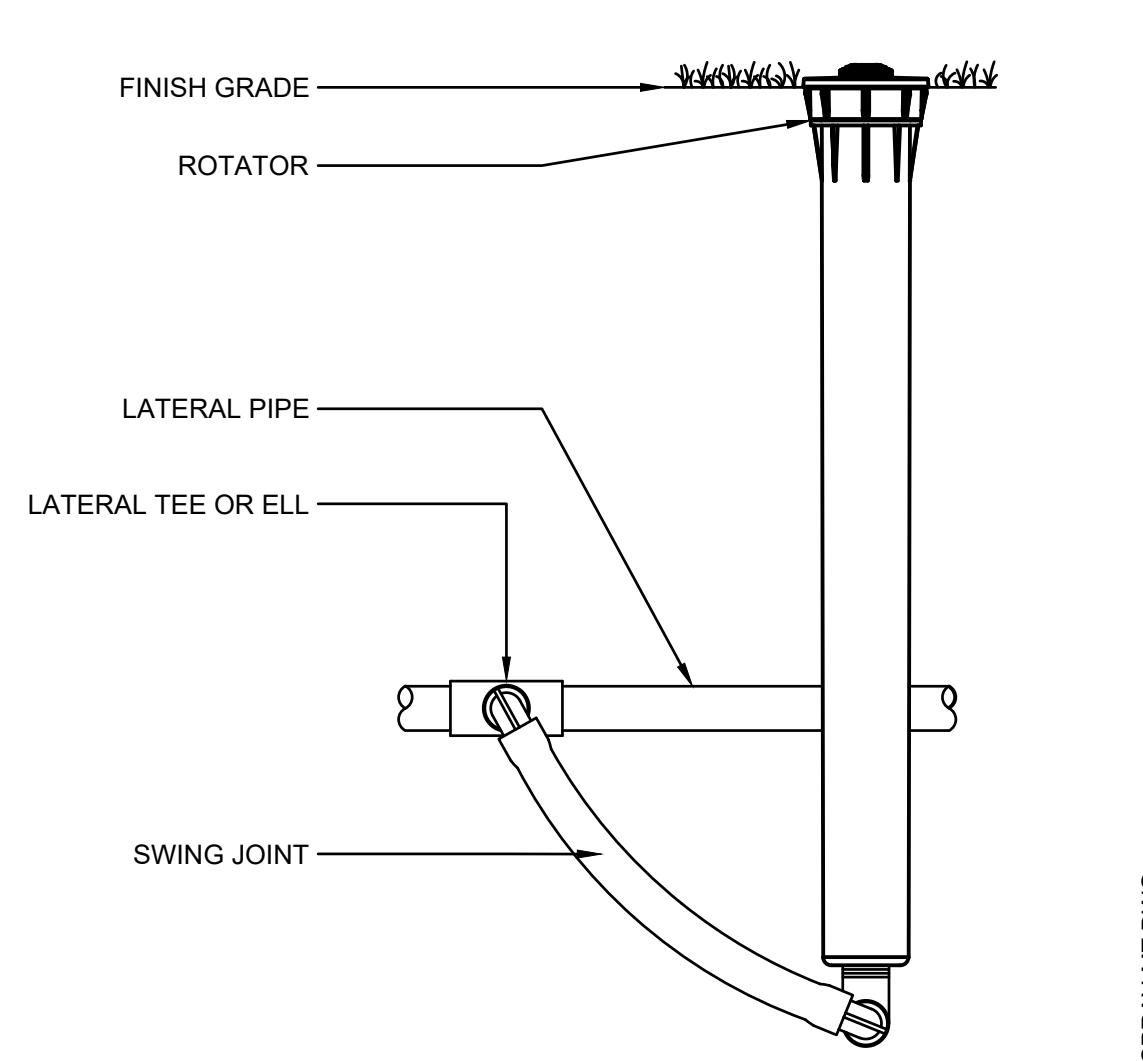
**2 ISOLATION / GATE VALVE** SCALE: NTS



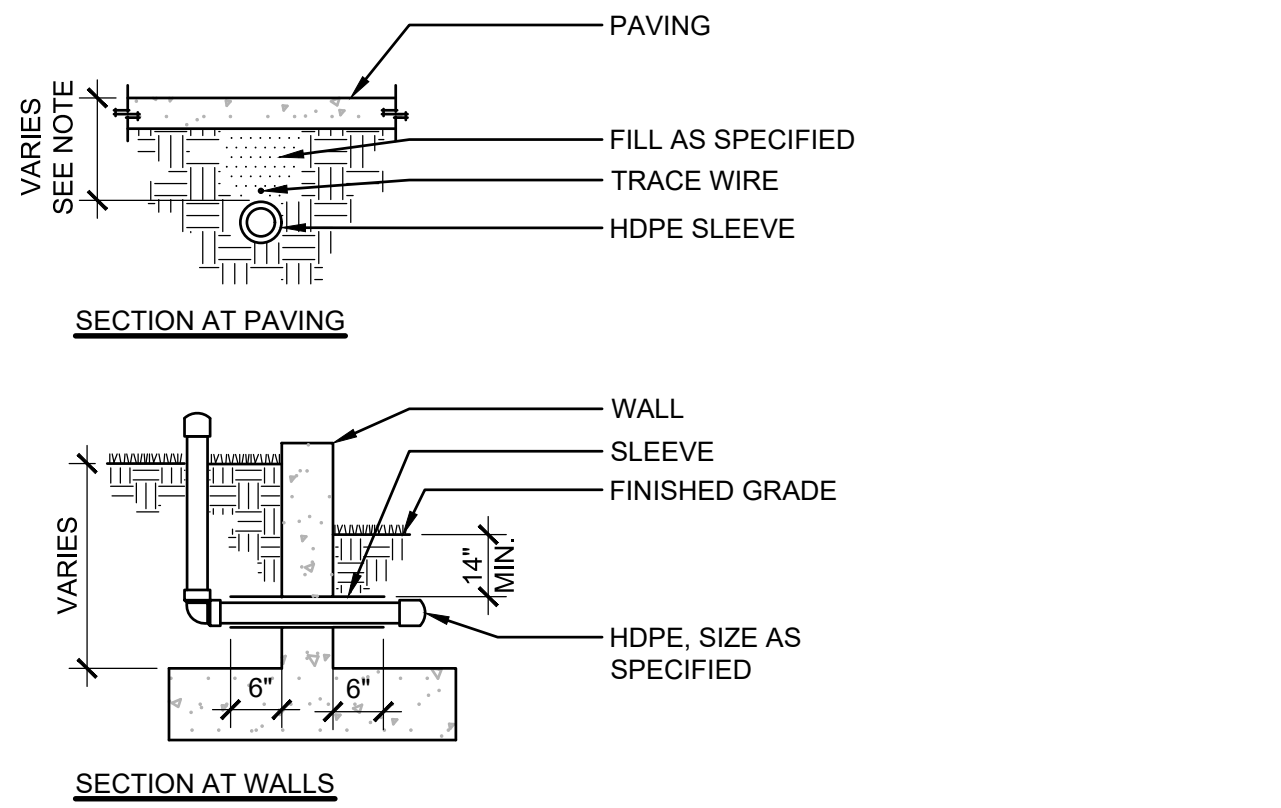
**1 POINT OF CONNECTION** SCALE: NTS



**8 DRIPLINE AROUND TREE** SCALE: NTS



**7 MULTI-TRAJECTORY SPRAY HEAD** SCALE: NTS

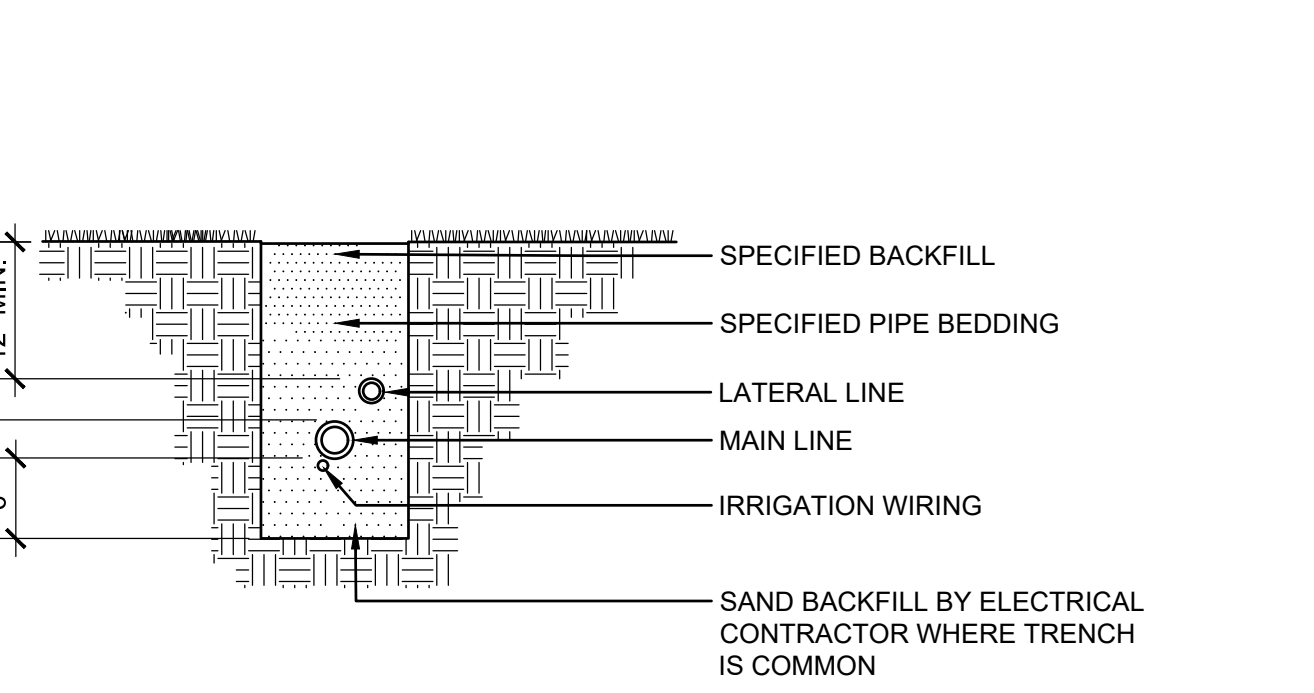


MIN DEPTH OF PIPE

MAINLINE	18"
LATERAL AT PAVING	14"
AT DRIVING SURFACE	24"

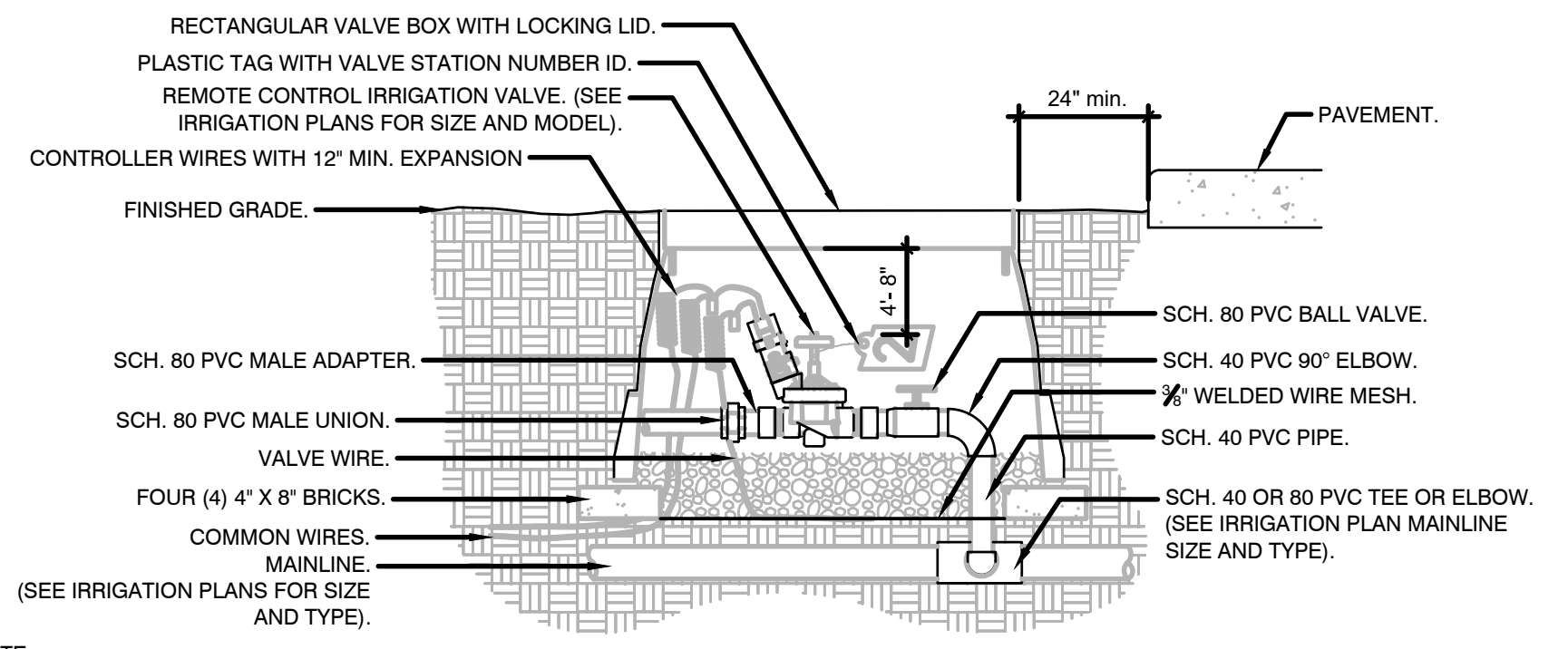
NOTES:  
1. SLEEVES TO BE TWICE DIAMETER OF LINE OR LINES PASSING THROUGH.  
2. EXTEND IRRIGATION SLEEVE 6-INCHES BEYOND EDGE OF PAVING, EACH SIDE.  
3. INSTALL SLEEVES AT SAME TIME AS WALL OR PAVING INSTALLATION.  
4. INSTALL PIPE IN SLEEVE BEFORE BACKFILLING AND CAP BOTH ENDS WITHOUT GLUE.

**6 IRRIGATION SLEEVES** SCALE: NTS



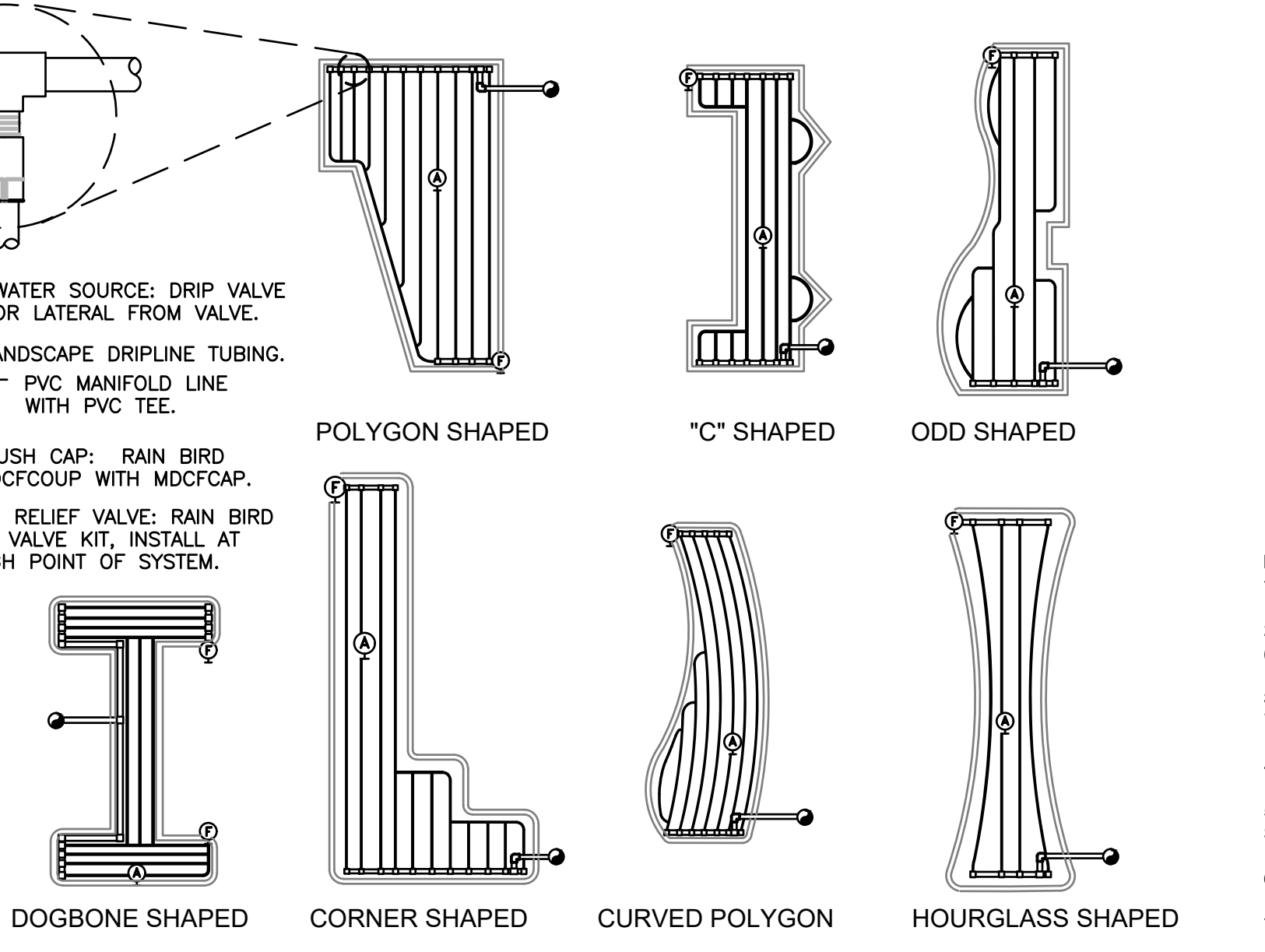
NOTES:  
1. SNAKE ALL HDPE PIPING IN TRENCHING  
2. TIE LOOSE 3 FT LOOP IN ALL IRRIGATION WIRING AT CHANGES IN DIRECTION GREATER THAN 30 DEGREES. UNTIE AFTER ALL CONNECTIONS HAVE BEEN MADE.  
3. WHERE ELECTRICAL WIRING DOES NOT SHARE COMMON TRENCH, OVER EXCAVATE TRENCH 2 INCHES MIN AND BACKFILL WITH SPECIFIED BEDDING MATERIAL.  
4. LOCATE ALL WIRING NOT IN COMMON TRENCHES ACCURATELY ON RECORD DRAWINGS.

**5 IRRIGATION TRENCHING (TYP)** SCALE: NTS



NOTE:  
1- LOCATE VALVE BOX WITHIN 24" OF PAVEMENT EDGE IN PLANTING AREA WHERE EASILY ACCESSIBLE WHENEVER POSSIBLE.  
2- COMMON WIRE AND CONTROLLER WIRE SHALL BE DIRECT BURIAL. 14 AWG OR LARGER. COLOR: COMMON (WHITE), CONTROLLER WIRE FOR TURF (BLUE), AND CONTROLLER WIRE FOR SHRUBS (RED). (SEE SPECIFICATIONS FOR 2-WIRE CONTROLLERS).  
3- ALL WIRE RUNS SHALL BE CONTINUOUS WITHOUT ANY SPLICES UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE. SEE SPLICE BOX DETAIL. WIRE CONNECTIONS SHALL BE MADE USING DBR/Y-6 CONNECTORS OR APPROVED EQUAL.  
4- VALVE BOX SHALL BE WRAPPED WITH MIN. 3 MIL THICK PLASTIC AND SECURE IT USING DUCT TAPE OR ELECTRICAL TAPE.  
5- MAINLINES 4" OR LARGER SHALL USE SADDLES AT THE CONNECTIONS POINTS TO THE IRRIGATION VALVE. (SEE SPECIFICATIONS FOR IRRIGATIONS SADDLES).  
6- ALL SCH. 80 PVC TO SCH. 40 PVC THREADED CONNECTIONS SHALL BE MADE USING TEFLON TAPE.  
7- VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.

**10 REMOTE CONTROL IRRIGATION VALVE** SCALE: NTS



**9 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS** SCALE: NTS

MAXIMUM LATERAL LENGTH (FEET)			
EMITTER FLOW RATE GPH	EMITTER SPACING		
	12" SPACING	18" SPACING	24" SPACING
10	124	96	175
15	124	96	175
20	249	191	350
30	307	236	434
40	358	288	495
50	407	336	550
60	454	381	607
70	500	424	664
80	544	464	720
90	587	501	775
100	629	536	829

GRID PRECIPITATION RATES (IN/HR)		
EMITTER FLOW RATE GPH	EMITTER SPACING	
	12"	18"
12	12	0.96
18	18	0.69
24	24	0.28

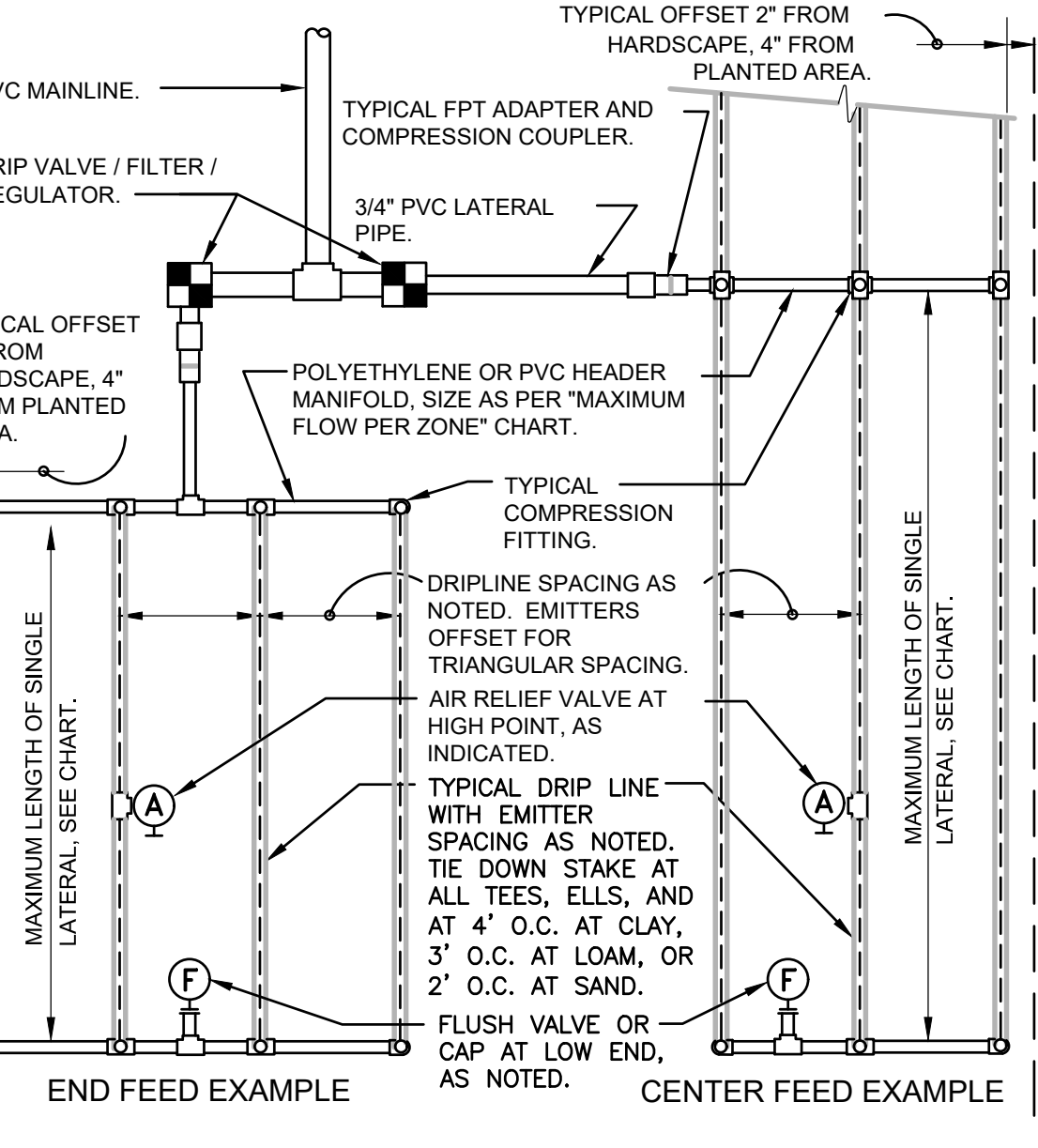
  

MAXIMUM FLOW PER ZONE		
SCHEDULE 40 PVC HEADER SIZE	MAX GPM	
	PSI LOSS	PSI LOSS
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.9 PSI
1"	13.5 GPM	4.9 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI

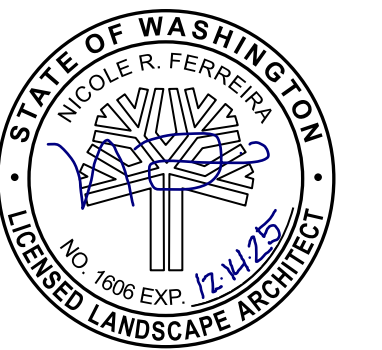
  

LATERAL FLOW PER 100 FT (GPM)		
EMITTER FLOW RATE GPH	EMITTER SPACING	
	12"	18"
0.6 GPH	1.8 GPM	0.67 GPM
0.9 GPH	1.8 GPM	1.0 GPM

SLOPED CONDITION NOTE:  
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.  
2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.  
3. NORMAL SPACING WITHIN THE TOP 1/2 OF SLOPE.  
4. INSTALL DRIPLINE AT 25% GREATER SPACING AT THE BOTTOM OF THE SLOPE.  
5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM ON A SEPARATE VALVE.



**9 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS** SCALE: NTS



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REVISION SCHEDULE		
Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/22/2024

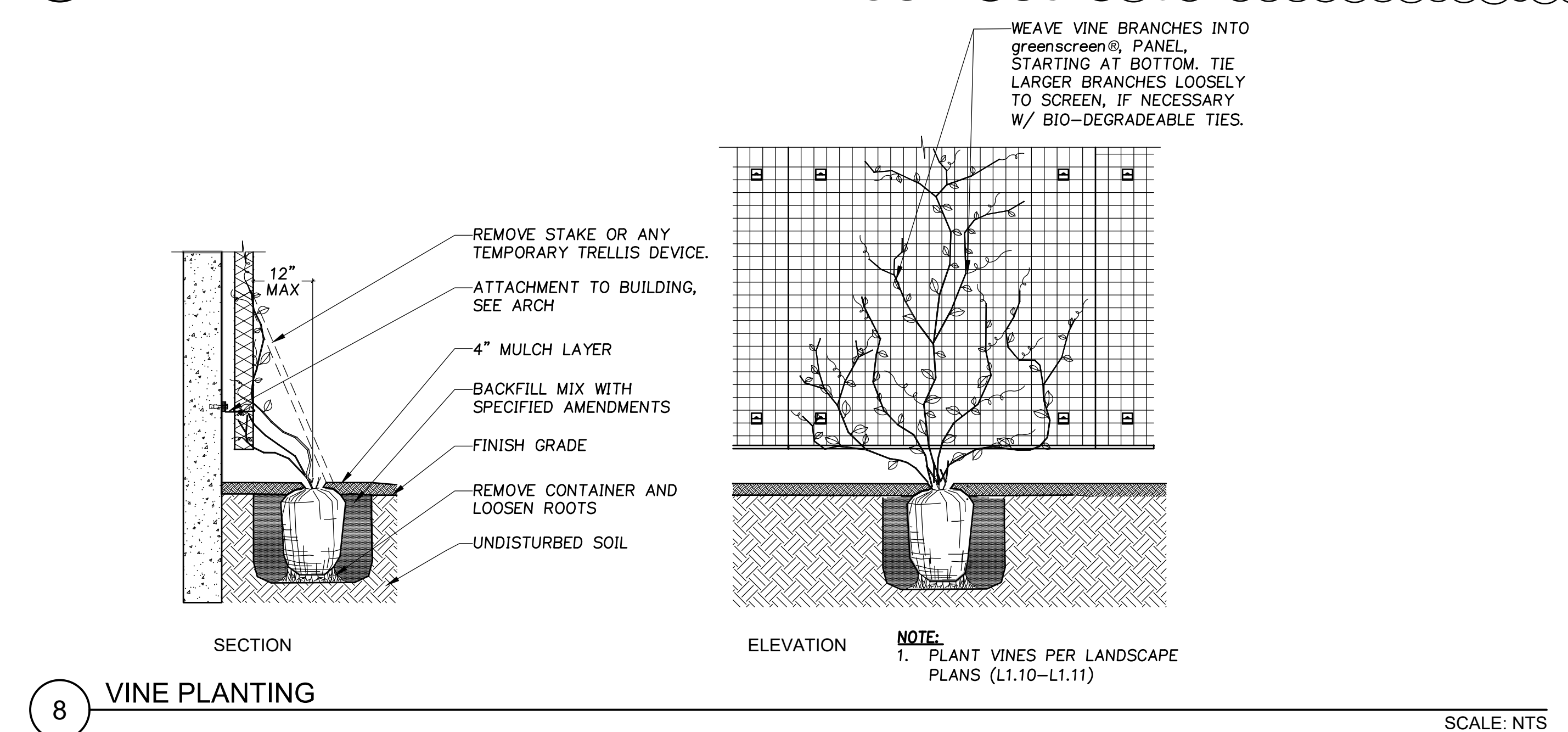
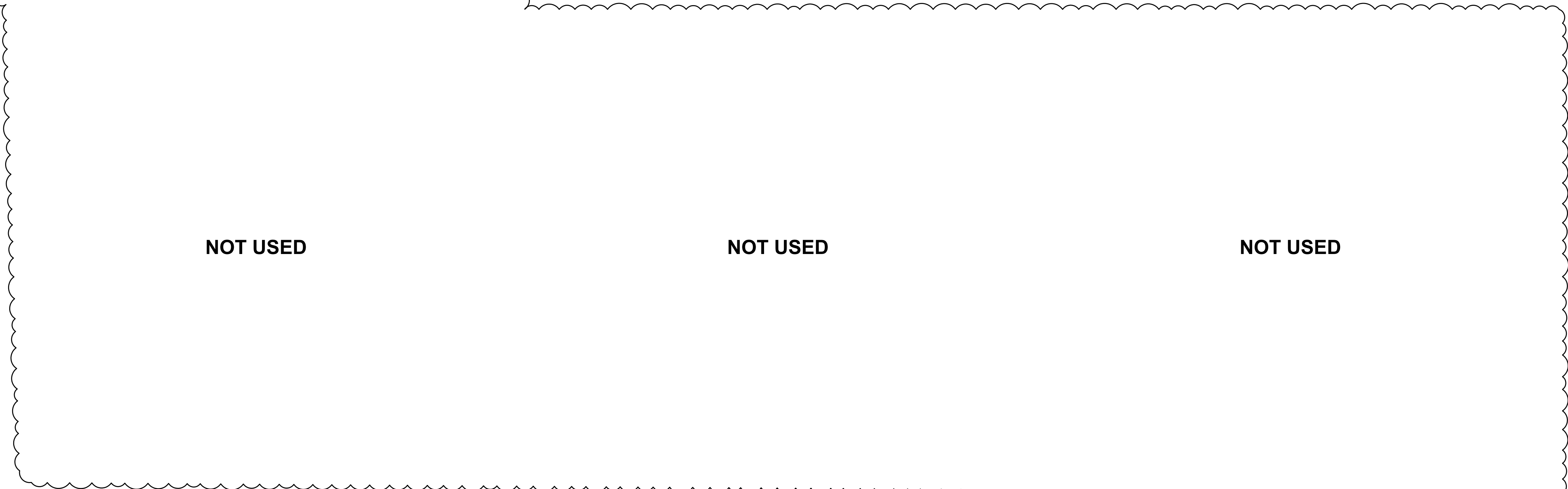
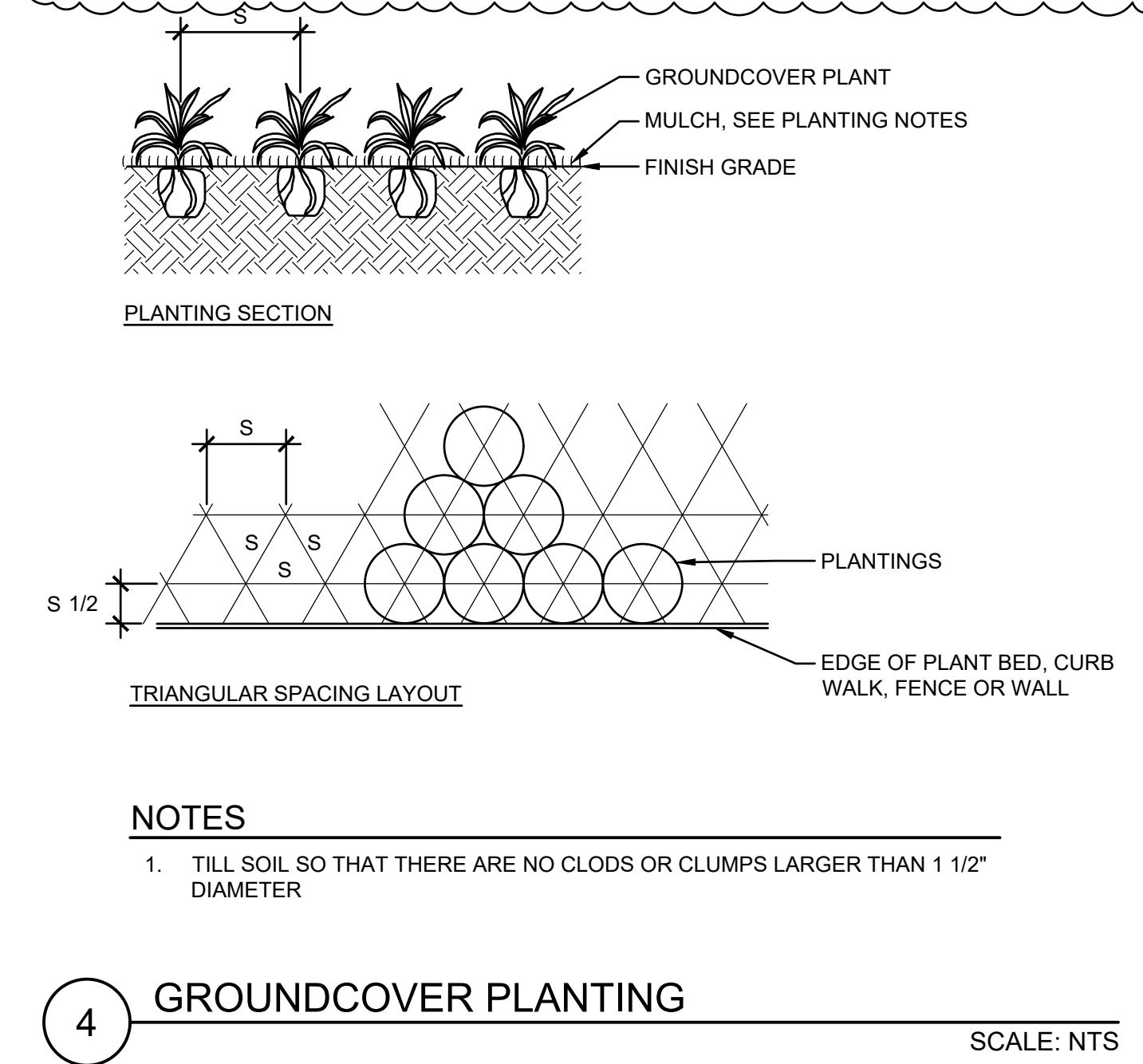
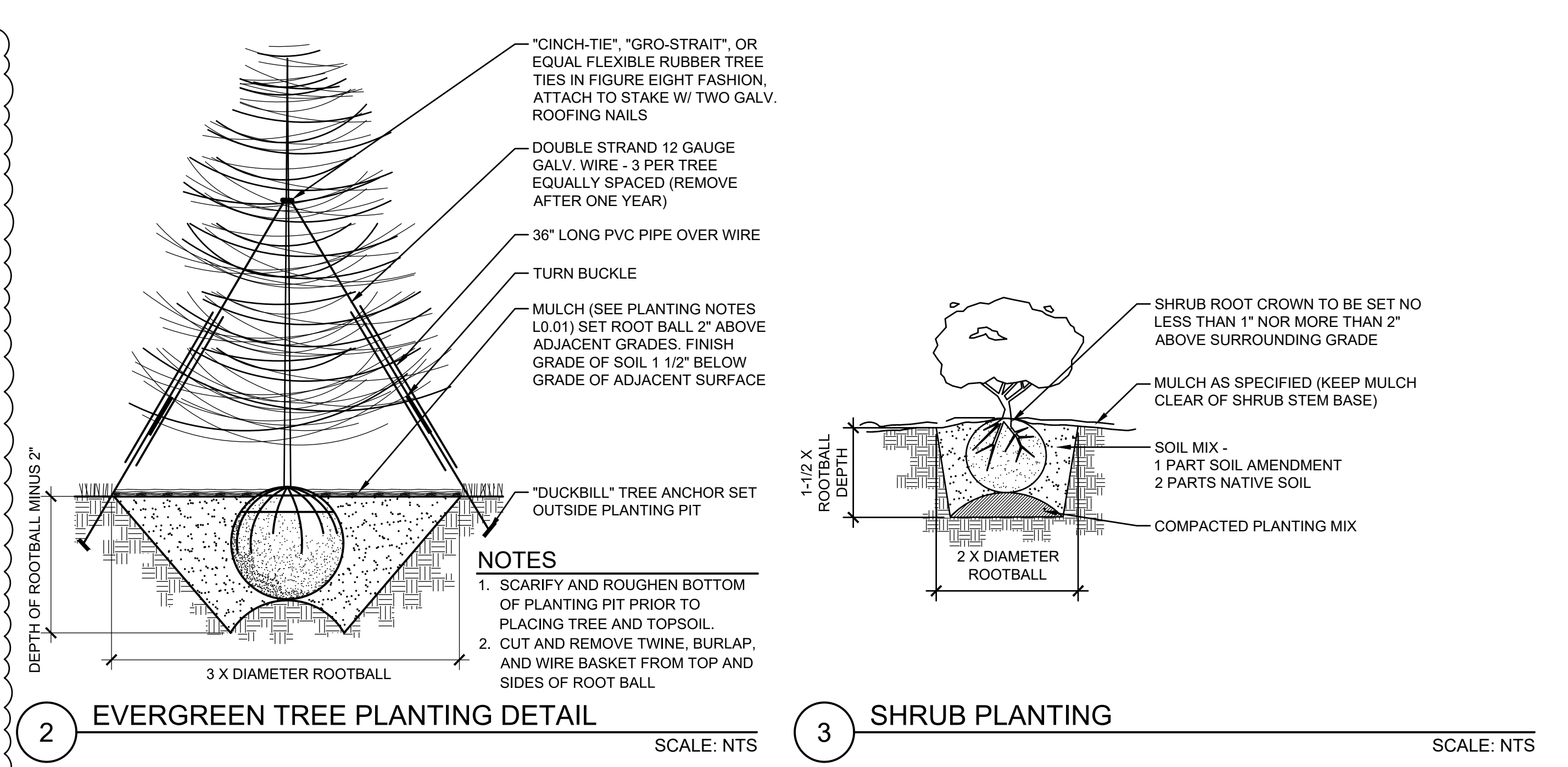
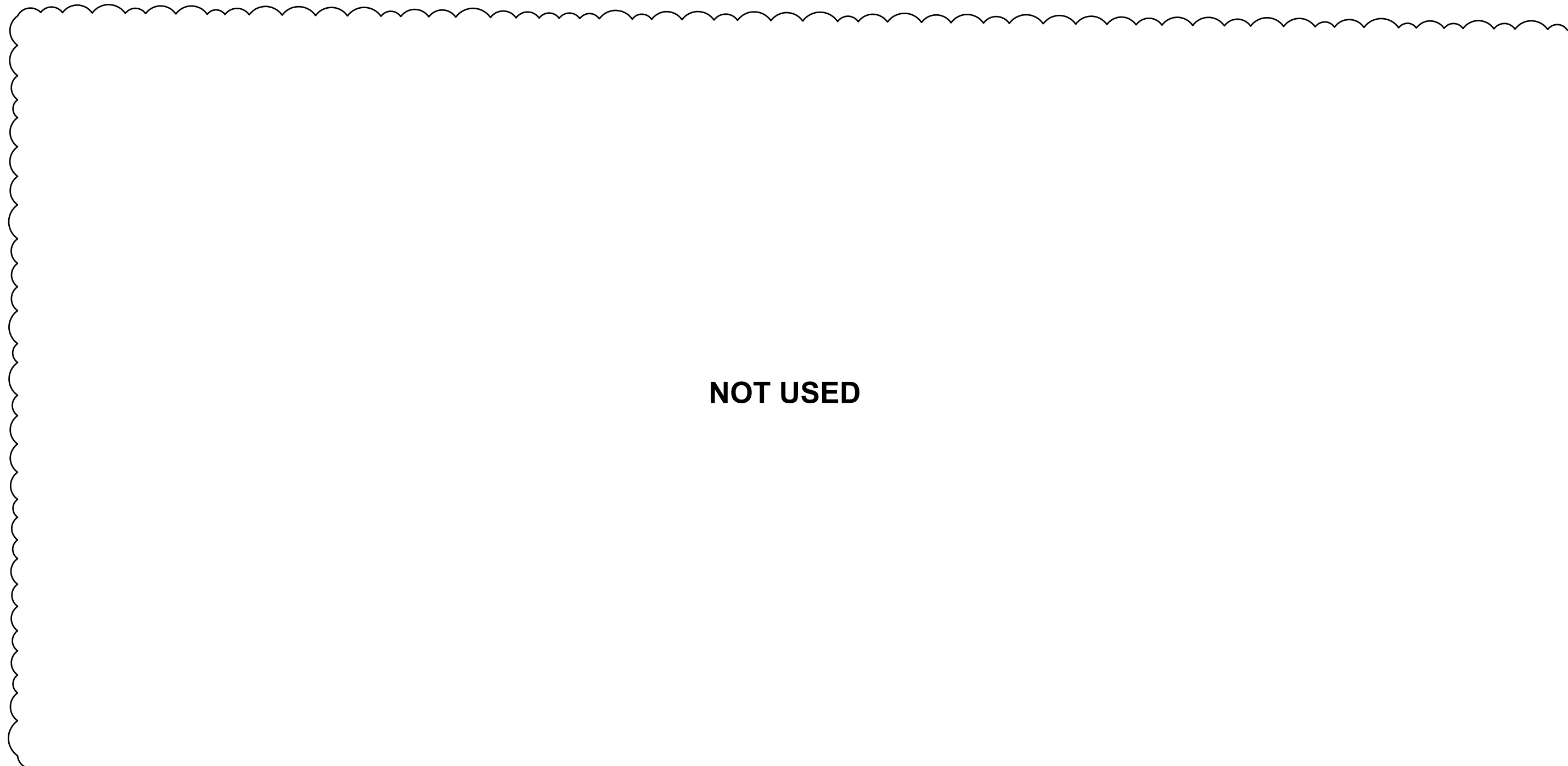
SHEET TITLE:  
**PLANTING  
DETAILS**

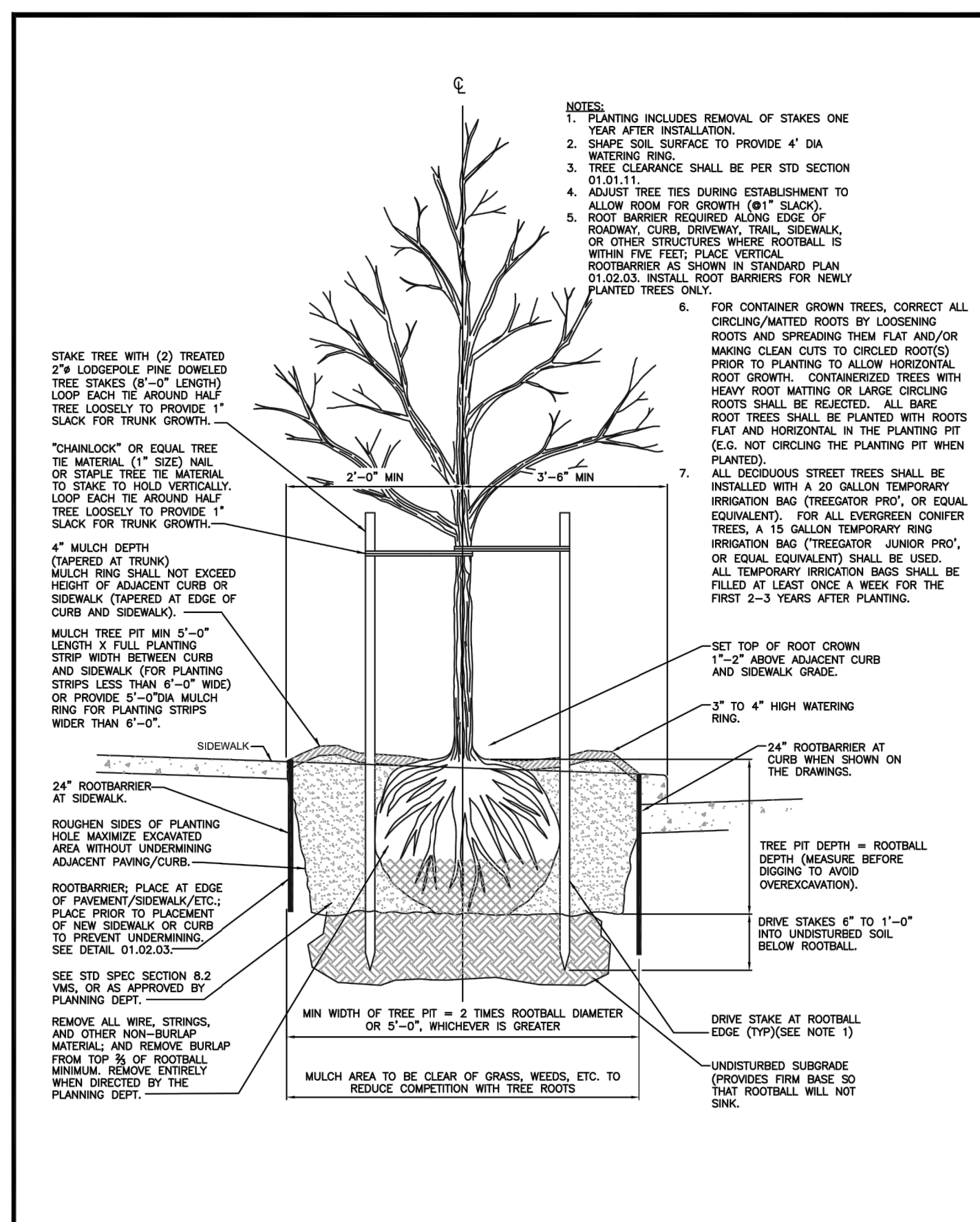
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CHECKED BY: NRF  
SHEET:

**L5.13**

JOB NO. **2220290.00**

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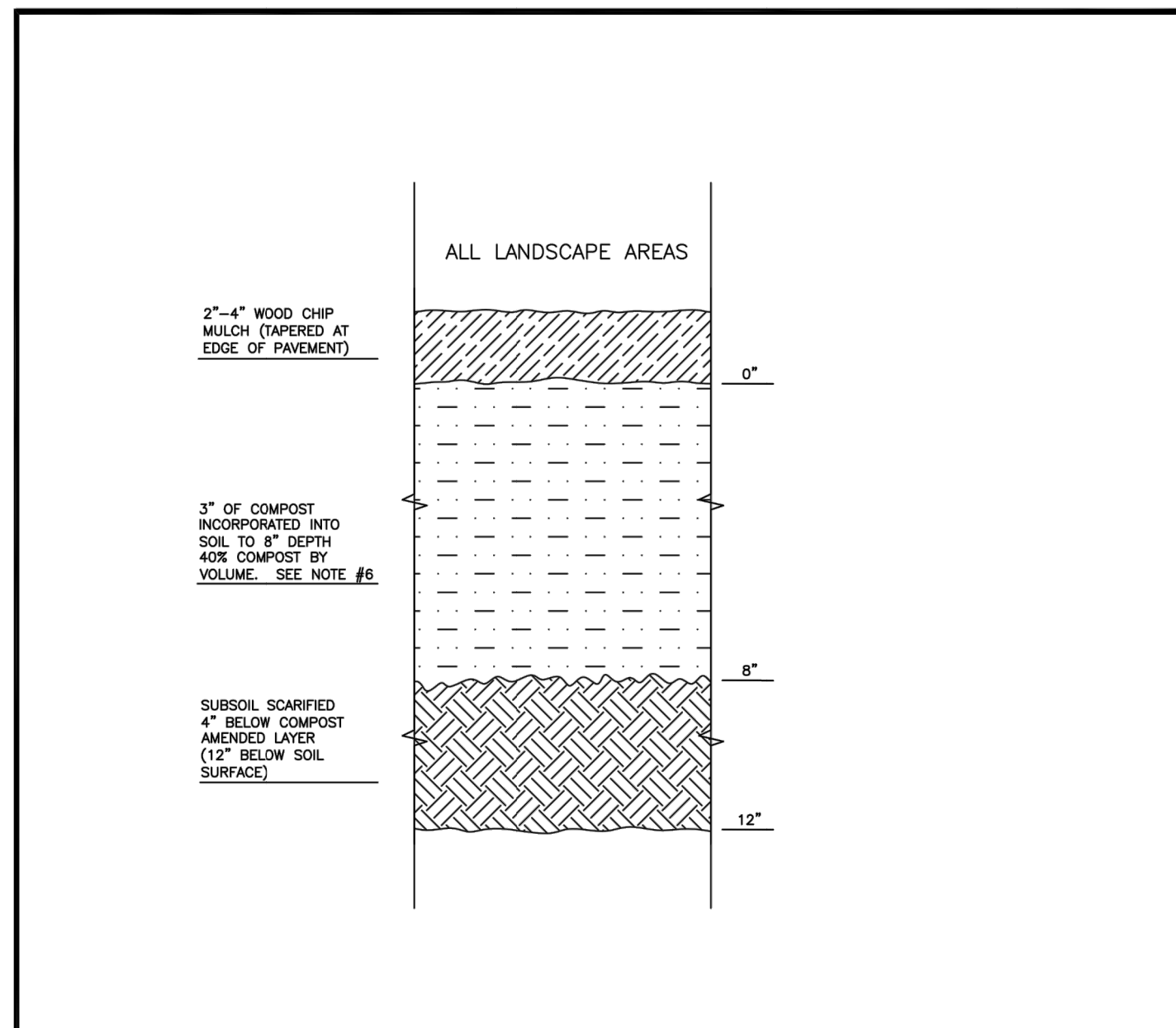




**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**1 STREET TREE PLANTING IN PLANTING STRIP**

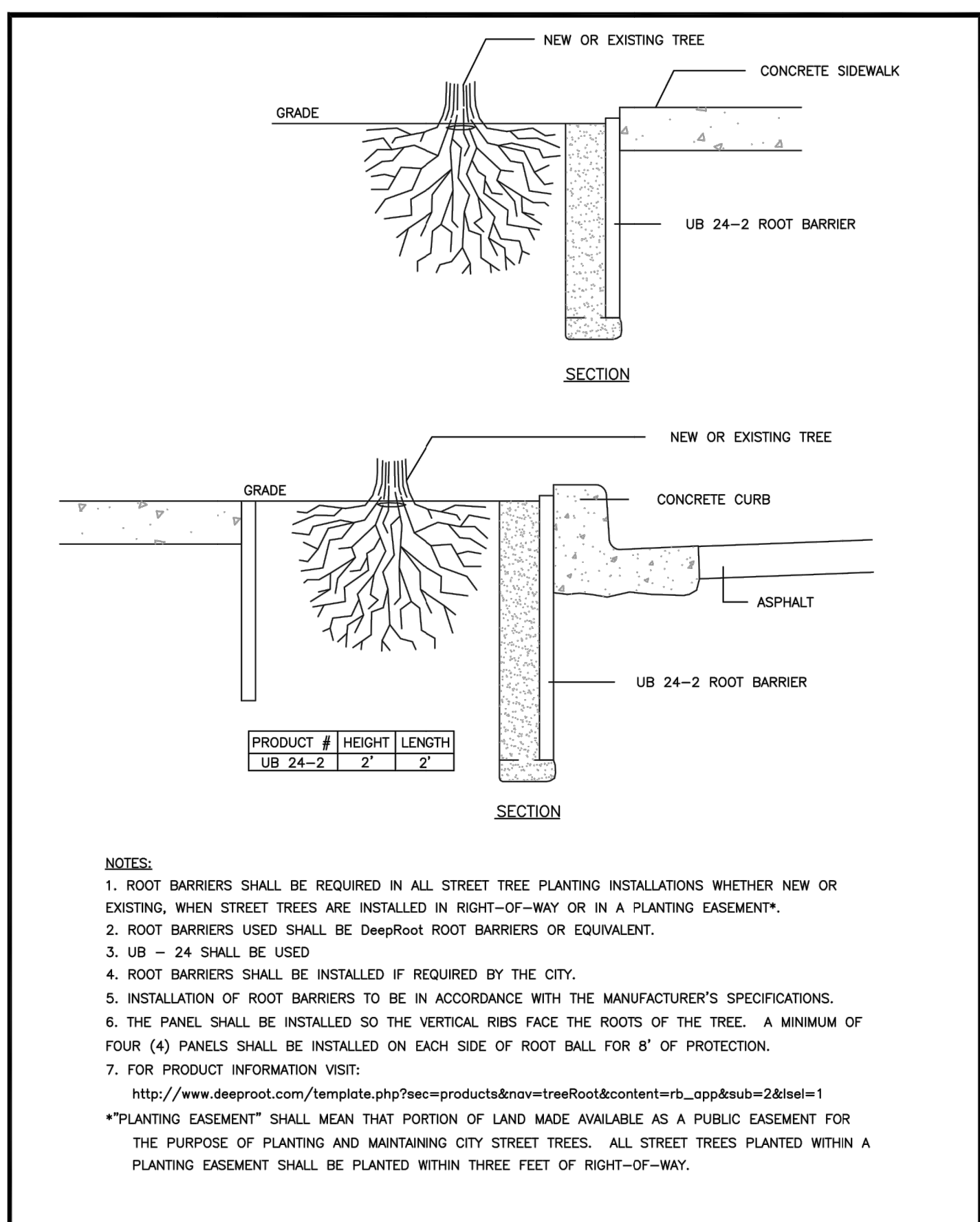
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FILE NAME: P:\PW\COMMON\STREET\STREET01.DWG	DATE APPROVED: 06/23/2015	DATE REVISION: 06/23/2015	SCALE: 1/1	01.02.07



**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**3 SOIL AMENDMENT AND DEPTH**

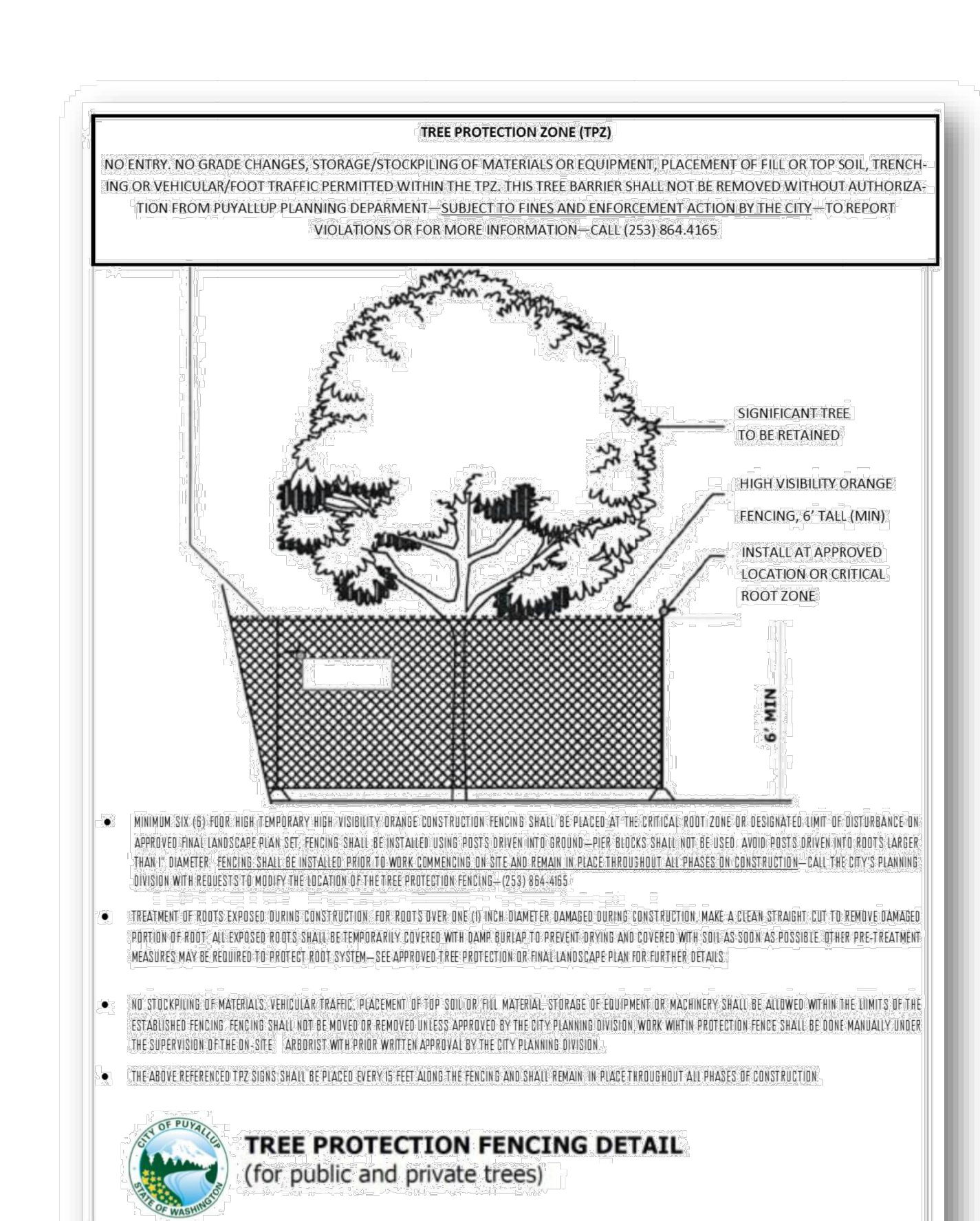
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FILE NAME: P:\PW\COMMON\STREET\STREET01.DWG	DATE APPROVED: 06/23/2015	DATE REVISION: 06/23/2015	SCALE: 1/1	01.02.08a



**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**2 ROOT BARRIER DETAIL**

DRAWN BY: JIM FERRIN-SVORKDA	CHECKED BY: STEVEN BEALE	APPROVED BY: COLLEEN HARRIS	DESIGNED BY: LINDA LIAN	CITY STANDARD
FILE NAME: P:\PW\COMMON\STREET\CITY200801_STREET01.DWG	DATE APPROVED: 08/26/2008	DATE REVISION: 06/23/2015	SCALE: 1/1	01.02.03



**CITY OF PUYALLUP**  
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

**4 TREE PROTECTION FENCING DETAIL**

DRAWN BY: LINDA LIAN	CHECKED BY: STEVEN BEALE	APPROVED BY: COLLEEN HARRIS	DESIGNED BY: LINDA LIAN	CITY STANDARD
FILE NAME: P:\PW\COMMON\STREET\STREET01.DWG	DATE APPROVED: 06/23/2015	DATE REVISION: 06/23/2015	SCALE: 1/1	01.02.08a

**Street Tree Installation Standards Table – City of Puyallup**

Criteria	Class I (Overhead Utility Street Trees)	Class II (Narrow Trees)	Class III (Medium Trees)	Class V (Large Trees)
Minimum planter strip width	4'	4'	5'	6'
On-center spacing standards	20-25 ft	20-25 ft	25-35 ft	30-40 ft
Plant under overhead utility lines?	Yes	No	No	No
Planting distance from buildings	7.5'	7.5'	10'	10'
Distance from utility and street light poles	10'	10'	10'	10'
Distance from fire hydrants	5'	5'	5'	5'
Distance from driveway (measured from the outer edge of driveway paving)	7.5'	7.5'	7.5'	7.5'
Distance from stop light signal poles	15'	15'	20'	25'
Distance from underground water, sanitary sewer or storm sewer lines	10'	10'	10'	10'
Distance from underground gas, power or other conduit	3'	3'	3'	5'
Minimum distance from intersection (as measured from the face of curb line corner at intersection)	30 ft	30 ft	30 ft	30 ft
Minimum distances from street signs (excluding parking signs)	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side

**VEGETATION MANAGEMENT STANDARDS (2022)**

**8.2. SOIL QUANTITY AND QUALITY STANDARDS**

ALL SOILS IN ALL LANDSCAPE INSTALLATIONS SHALL CONFORM TO THE FOLLOWING SOIL DEPTH AND QUALITY REQUIREMENTS. PLEASE REFER TO THE APPENDIX 20.9 FOR FURTHER INSTALLATION GUIDANCE:

A. A MINIMUM OF EIGHT (8) INCHES OF TOPSOIL, CONTAINING ORGANIC MATTER AT TEN (10) PERCENT DRY WEIGHT IN PLANTING BEDS, AND FIVE (5) PERCENT DRY WEIGHT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE ORIGINAL UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT (8) INCHES EXCEPT WHERE THREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEED TO MEET THE CRITERIA. SUBSOILS BLOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST SIX (6) INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE. INSTALLATION OF THE EIGHT (8) INCHES OF TOPSOIL, AS DESCRIBED ABOVE, SHALL GENERALLY BE ACHIEVED BY PLACING FIVE (5) INCHES OF IMPORTED SANDY LOAM TOPSOIL INTO PLANNED LANDSCAPE AREAS (SUB-BASE SCARIFIED FOUR (4) INCHES) WITH A THREE (3) INCH LAYER OF COMPOST TILLED INTO THE ENTIRE DEPTH.

B. FOR STREET TREES IN THE RIGHT OF WAY PLANTER STRIP, THE FOLLOWING STANDARDS SHALL APPLY IN RELATION TO SOIL DEPTH, SOIL AMENDMENTS AND INSTALLATION OF NEW STREET TREES. THE FOLLOWING NOTES SHALL BE SHOWN ON THE FACE OF THE PRELIMINARY AND FINAL LANDSCAPE PLAN SHEETS:

- FOR NEW CONSTRUCTION:** IN AREAS WHERE A NEW PLANTER STRIP AND STREET TREE SHALL BE ESTABLISHED OR RECONSTRUCTED DUE TO A STREET CONSTRUCTION PROJECT, THE PLANTER STRIP AREA SHALL BE EXCAVATED TO A DEPTH OF TWENTY-FOUR (24) INCHES AND BACKFILLED FOLLOWING THE STANDARD ABOVE TO ACHIEVE A TOPSOIL MIX WITH 40 PERCENT COMPOST BY VOLUME. THE CONTRACTOR OR INSTALLER SHALL:
  - REVIEW THE CITY STANDARD PLANTING DETAIL** – ALL CONTRACTORS/INSTALLERS ARE REQUIRED TO FOLLOWING CITY STANDARD #01.02.07 (STREET TREE PLANTING) AND #01.02.03 (ROOT BARRIER INSTALLATION). THE CONTRACTOR/INSTALLER SHALL REVIEW THE PLANTING STANDARD DETAIL PRIOR TO INSTALLATION TO UNDERSTAND THE CITY'S REQUIREMENTS. FAILURE TO FOLLOW THE STANDARD MAY RESULT IN REJECTION OF THE WORK BY THE INSPECTOR AND/OR PLANNING DEPARTMENT.
  - SCHEDULE A FIELD PRE-CONSTRUCTION MEETING** - THE CONTRACTOR/INSTALLER SHALL CONTACT THE SITE INSPECTOR AND PLANNING DEPARTMENT FOURTY-EIGHT (48) HOURS IN ADVANCE OF THE INSTALLATION OF STREET TREE(S) FOR A FIELD PRE-CONSTRUCTION MEETING ON SITE TO REVIEW THE APPROVED PLAN SET AND CITY STANDARD DETAILS. IF STREET TREES ARE TO BE INSTALLED OVER A LONGER TIMELINE (SUCH AS A RESIDENTIAL PLAT WHERE TREES MAY BE INSTALLED OVER A MULT-MONTH PERIOD), THE CONTRACTOR/INSTALLER SHALL HOLD ONE CONSOLIDATED PRE-CON TO REVIEW PLANS. ALL STREET TREES SHALL BE INSPECTED AFTER PLANTING BY THE PLANNING DEPARTMENT.
  - EXCAVATE ALL CONSTRUCTION MATERIALS** - EXCAVATE ALL CONSTRUCTION MATERIALS, REMNANT SOIL, GRAVEL, PIT RUN, CONSTRUCTION DEBRIS, ETC. FROM THE PLANTER STRIP AREA TO A DEPTH OF TWENTY-FOUR (24) INCHES PRIOR TO PLANTING. DISCARD THIS MATERIAL AS THE PLACEMENT OF NEW COMPOST AMENDED TOPSOIL IS REQUIRED.
  - PREPARE THE PLANTING STRIP** - AFTER EXCAVATING ALL MATERIALS FROM THE PLANTER STRIP, SCARIFY AND RIP THE SUB-BASE WITH THE TEETH OF A BACKHOE BUCKET (OR OTHER MECHANICAL MEANS OR HAND TOOLS) TO A DEPTH OF 6" WITH MULTIPLE PASSES, 90 DEGREES TO EACH OTHER. PRIOR TO PLANTING THE TREE, RE-COMPACT THE TREE BASE WHERE THE STREET TREE WILL BE PLANTED TO AVOID SETTLING OF THE ROOT BALL. AT THIS STAGE, IF THE TREE IS TO BE PLANTED WHEN THE PLANTER STRIP IS BACKFILLED WITH AMENDED TOPSOIL, THE CONTRACTOR/INSTALLER SHOULD MEASURE THE DEPTH OF THE ROOT BALL TO DETERMINE WHEN TO PLACE THE TREE IN THE PIT DURING THE BACKFILLING PROCESS. IF THE ROOT BALL OR ROOT MASS (IN THE CASE OF BARE ROOT TREES) IS LESS THAN 24", THE STREET TREE SHALL BE PLANTED IN A MANNER IN WHICH THE ROOT FLARE IS LEVEL WITH OR AT LEAST 1" ABOVE GRADE AT THE TIME OF FINISHED PLANTING. THIS MAY REQUIRE THE ROOT BALL BE PLACED ON A COMPACTED SUB-BASE OF THE COMPOST AMENDED TOPSOIL AS BACKFILLING IS OCCURRING.
- INSTALL ROOT BARRIER PANELS** - AT THIS STAGE THE CONTRACTOR/INSTALLER SHALL PLACE TWENTY-FOUR (24) INCH DEEP ROOT BARRIER PANELS (UB-24) ALONG THE EDGE OF THE SIDEWALK AND CURB LINE FOR A TOTAL OF EIGHT (8) FEET OF LINEAL PROTECTION ALONG EITHER SIDE OF THE PLANTING AREA. THE PANELS SHALL BE INSTALLED PERPENDICULAR TO THE EDGE OF PAVED SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDS FOR A LINEAR APPLICATION. THE ROOT BARRIER PANELS SHALL NOT BE INSTALLED IN THE PLANTING PIT AS A 'SURROUND' APPLICATION UNLESS SPECIFIED ON THE FINAL LANDSCAPE PLANS. THE TOP OF THE ROOT BARRIER PANEL SHALL BE INSTALLED SUCH THAT ONE-HALF INCH OF THE ROOT BARRIER IS ABOVE THE FINISHED GRADE.
- COMPOST AMENDED TOPSOIL REQUIRED** – TOPSOIL SOURCE SHALL BE REVIEWED AND APPROVED DURING THE PRE-CONSTRUCTION MEETING; ALL TOPSOIL SHALL BE A TOP QUALITY SANDY-LOAM MIX, OR EQUIVALENT AS APPROVED BY THE PLANNING DEPARTMENT. THE TOPSOIL SHALL BE AMENDED ON SITE DURING INSTALLATION WITH COMPOST TO ACHIEVE A FORTY(40) PERCENT BY VOLUME TOPSOIL MIX IN THE RIGHT-OF-WAY PLANTER STRIP. IMPORTED TOPSOIL MAY BE USED BY THE CONTRACTOR IF DATA 'CUT SHEETS' ARE AVAILABLE FROM THE SUPPLIER CERTIFYING COMPOST AMENDMENT EQUALING FORTY (40) PERCENT BY VOLUME USING ONE OF THE APPROVED COMPOST SOURCES BELOW. COMPOST SHALL ONLY BE SOURCED FROM:
  - CASCADE COMPOST (ALSO KNOWN AS PREP/LRI) (AVAILABLE THROUGH PIERCE COUNTY RECYCLING, COMPOSTING AND DISPOSAL, 10308 SALES ROAD, TACOMA, WASHINGTON 98499, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
  - TAGRO COMPOST MIX (AVAILABLE THROUGH CITY OF TACOMA, 2201 E. PORTLAND AVENUE, GATE 6, TACOMA, WA, 98421, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
  - CEDAR GROVE COMPOST (AVAILABLE THROUGH CEDAR GROVE COMPOST, 17825 CEDAR GROVE ROAD S.E., MAPLE VALLEY, 98038, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
- INSTALL AND AMEND TOPSOIL** - TO AVOID STRATIFIED LAYERS, FIRST PLACE SEVEN (7) INCHES OF APPROVED TOPSOIL IN THE PREPARED/SCARIFIED PLANTING STRIP AREA AND MECHANICALLY TILL IN FIVE (5) INCHES OF APPROVED COMPOST. FOLLOW THIS PROCEDURE TWICE TO ACHIEVE THE TOTAL TWENTY-FOUR (24) INCHES TOPSOIL DEPTH. FINISHED GRADE OF TOPSOIL SHOULD BE ONE-HALF INCH BELOW THE EDGE OF SIDEWALK TO ALLOW THE ROOT BARRIER PANEL TO BE PROPERLY INSTALLED ABOVE FINISHED GRADE.
- INSTALL TREE STAKES AND FINISH MULCH** - PLACEMENT OF FOUR (4) INCHES OF WOOD CHIP MULCH, WATER BASIN RINGS, TREE STAKING, AND TEMPORARY IRRIGATION BAGS (WHERE REQUIRED) SHALL FOLLOW CITY STANDARD #01.02.07.

B. THE PROJECT LANDSCAPE ARCHITECT SHALL UTILIZE ONE OF THE DESIGN METHODS OUTLINED IN APPENDIX 20.9 IN INCORPORATING THIS STANDARD. THE LANDSCAPE ARCHITECT SHALL ESTIMATE TOTAL TOPSOIL AND COMPOST IMPORT VOLUMES AND SPECIFY THE TOPSOIL AND COMPOST SOURCE DURING THE FINAL LANDSCAPE PLAN REVIEW. A TOPSOIL DELIVERY TICKET(S), INVOICE(S), OR OTHER PHYSICAL PROOF THAT THE CORRECT QUANTITY AND QUALITY OF TOPSOIL WAS DELIVERED SHALL BE PROVIDED AT THE TIME OF FINAL INSPECTION.

**M.**

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MICHAEL R. FERRELL  
LANDSCAPE ARCHITECT  
NO. 1886 EXP. 12/31/2025

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**REVISION SCHEDULE**

Delta	Issued As	Issue Date
1	PLAN CHECK	12/07/2023
2	PLAN CHECK	02/22/2024

SHEET TITLE:  
**STREET PLANTING DETAILS**

DRAWN BY: LJM  
CHECKED BY: NRF  
SHEET:

**L5.14**

JOB NO. **2220290.00**

**CIVIL PERMIT 12/07/2023**