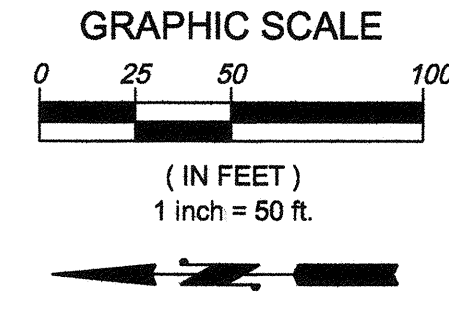






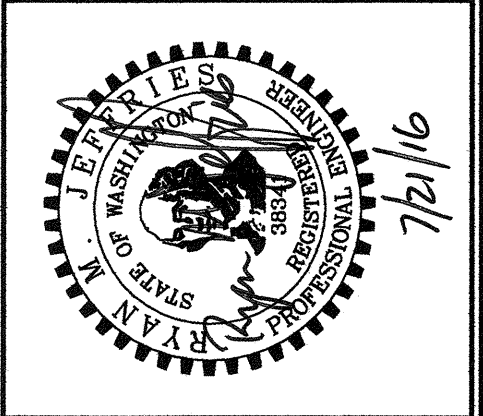
**CASCADE CHRISTIAN  
SEC. 35\TWP. 20\RGE. 04, W.M.  
21ST ST ROAD IMPROVEMENT PLAN**



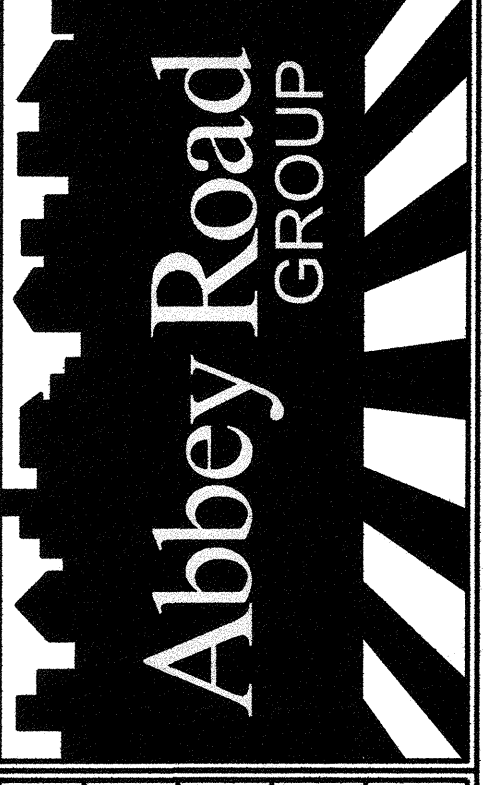
APPROVED  
BY: *[Signature]*  
CITY OF PUYALLUP  
ENGINEERING SERVICES  
DATE: 8/4/2016  
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.  
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

TITLE:  
**Cascade Christian  
Off Site Improvement Set  
21st St Road Improvement Plan**  
Puyallup, WA

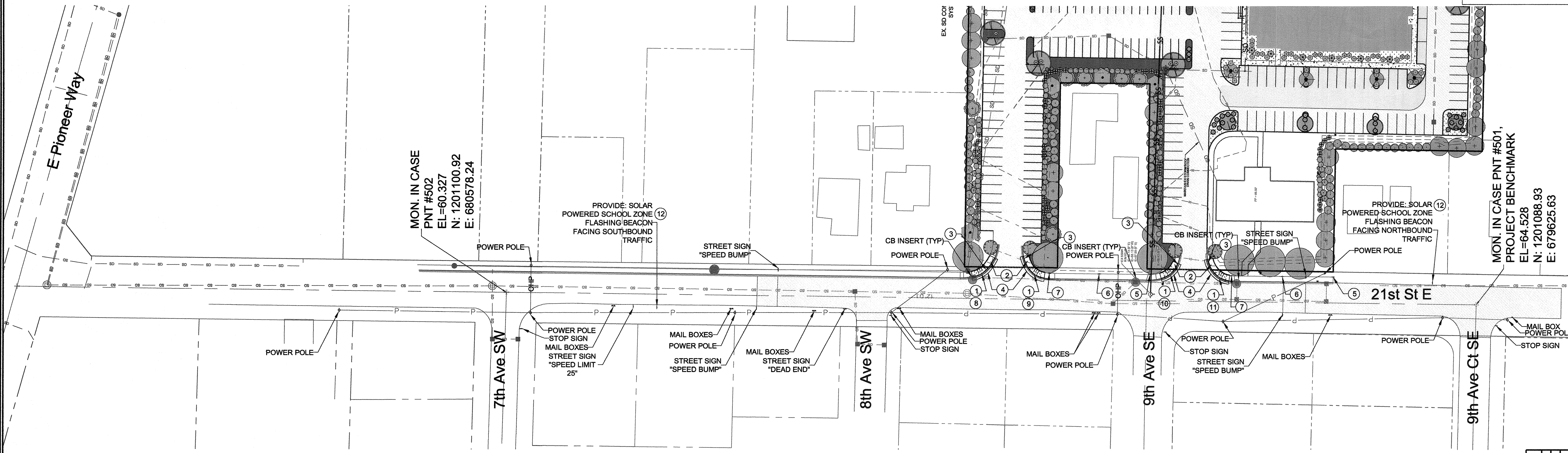
FOR:  
**Cascade Christian School  
Don Johnson**  
815 21st St. SE  
Puyallup, WA 98372



**Abbey Road Group  
Land Development  
Services Company, LLC**  
923 SHAW ROAD, SUITE A  
PUYALLUP, WA 98372  
P.O. Box 1224, Puyallup, WA 98371  
(253) 435-3699, Fax (253) 446-3159



DESIGNED BY: Ryan Jeffries  
DEVELOPMENT REVIEW: RJ  
APPROVED BY: Ryan Jeffries  
DRAFTED BY: Ryan Jeffries  
DATE: 21 July 2016  
SHEET: 03



MON. IN CASE  
PNT #502  
EL=60.327  
N: 1201100.92  
E: 680578.24

MON. IN CASE PNT #501,  
PROJECT BENCHMARK  
EL=64.528  
N: 1201088.93  
E: 679625.63

**NOTES:**

1. CONTRACTOR SHALL REPAIR OR RESTORE DAMAGED OR DEFACED CURBS OR SIDEWALKS TO CITY STANDARDS IF DAMAGED DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE CATCH BASIN INSERTS PER DETAIL SHEET 7 ON EXISTING CATCH BASINS ADJACENT TO IMPROVEMENTS AT CURB RAMPS AS SHOWN.


**CONSTRUCTION KEY NOTES:**

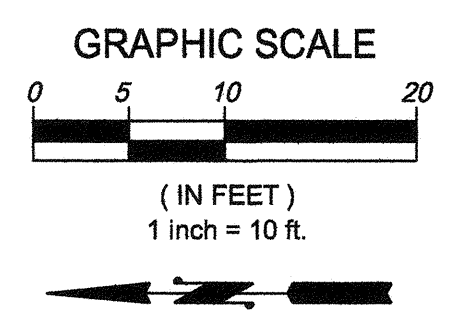
1. CONSTRUCT ADA RAMPS PER WSDOT STD DETAIL F-40.12-02 TYPE PARALLEL A, SHEET 7. SEE ALSO RAMP GRADING DETAILS SHEET 4.
2. CONSTRUCT SIDEWALK WITHOUT PLANTING STRIP PER STD DETAIL 01.02.01 SHEET 7.
3. CONSTRUCT CURB AND GUTTER PER STD DETAIL 01.02.09 SHEET 7.
4. CONSTRUCT STREET PATCH PER STD DETAIL 01.01.20 SHEET 7.
5. CONSTRUCT NO PARKING SIGN NP-1 PER DETAIL SHEET 6.
6. CONSTRUCT NO PARKING SIGN NP-2 PER DETAIL SHEET 6.
7. CONSTRUCT NO PARKING SIGN NP-3 PER DETAIL SHEET 6.
8. SEE RAMP GRADING DETAIL # 1 SHEET 4.
9. SEE RAMP GRADING DETAIL # 2 SHEET 4.
10. SEE RAMP GRADING DETAIL # 3 SHEET 4.
11. SEE RAMP GRADING DETAIL # 4 SHEET 4.
12. SEE SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM NOTES SHEET 6. FLASHING BEACON LOCATIONS SHALL BE FIELD VERIFIED WHILE INSTALLING. CONTACT CITY TO FIELD CHECK. CITY OF PUYALLUP WILL PROGRAM THE SCHOOL FLASHER OPERATION AND TIMING, BUT ARE TO BE MAINTAINED BY THE SCHOOL.

REVISIONS:	CHK:	APR:	DATE:	PER:
BY:	RAU	RAU	07/21/16	REVISED PER CITY COMMENTS DATED JULY 20, 2016

File: S:\PROJECTS\FILES\ACTIVE\2016\Cascade Christian - 21st St Road Improvement\03-143\_Cascade Christian - 21st St Road Improvement\03-143\_Cascade Christian - 21st St Road Improvement.dwg  
Plotted By: Ryan Jeffries  
7/21/2016 3:22 PM

CASCADE CHRISTIAN  
SEC. 35\TWP. 20\RGE. 04, W.M.  
21ST ST SITE ENTRANCE PLAN

APPROVED  
BY:   
CITY OF PUYALLUP  
ENGINEERING SERVICES  
DATE: 8/4/2016  
NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR 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  
ENGINEERING SERVICES  
MANAGER

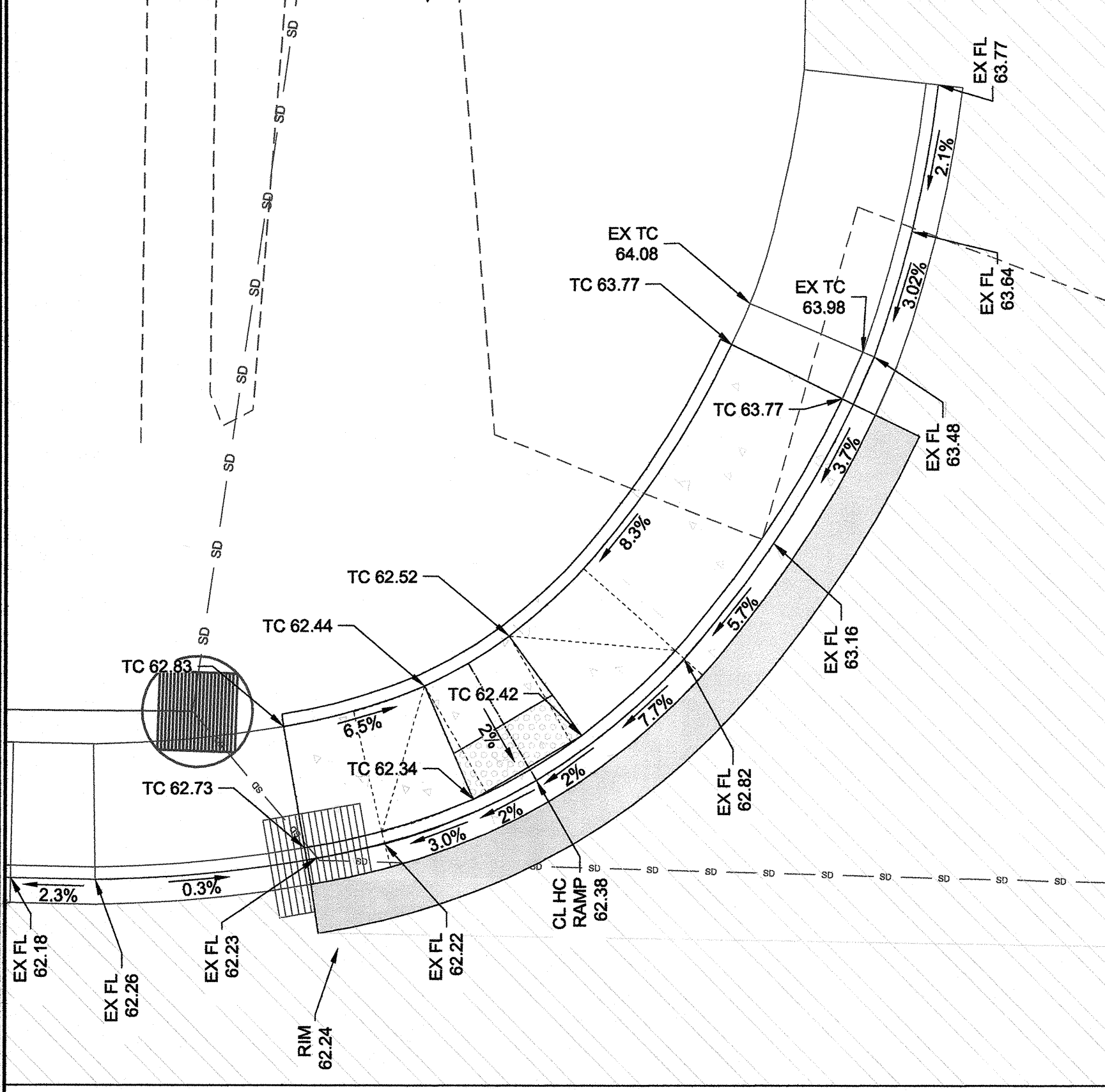
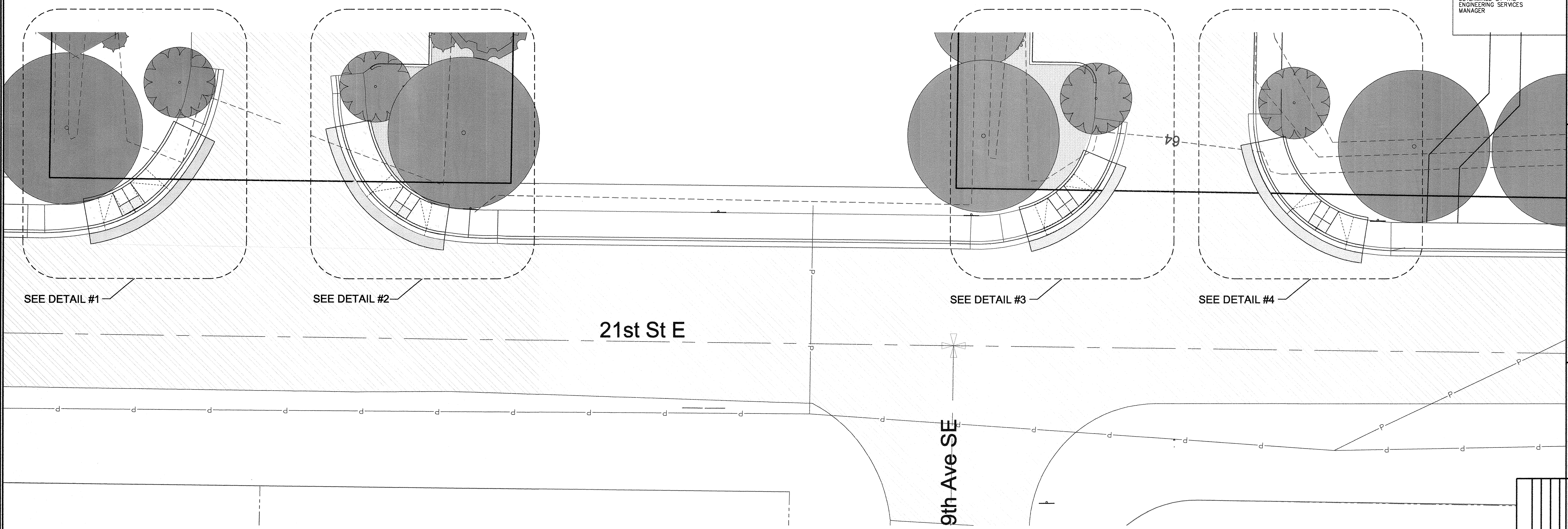
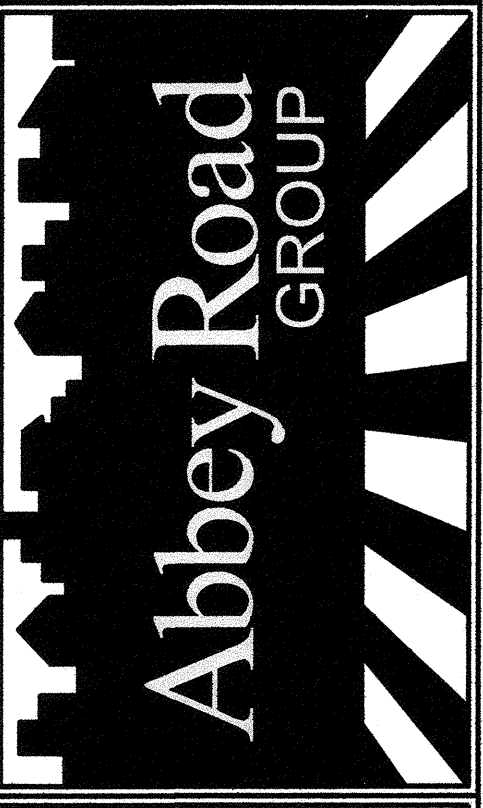


TITLE:  
Cascade Christian  
Off Site Improvement Set  
21st St Site Entrance Plan  
Puyallup, WA

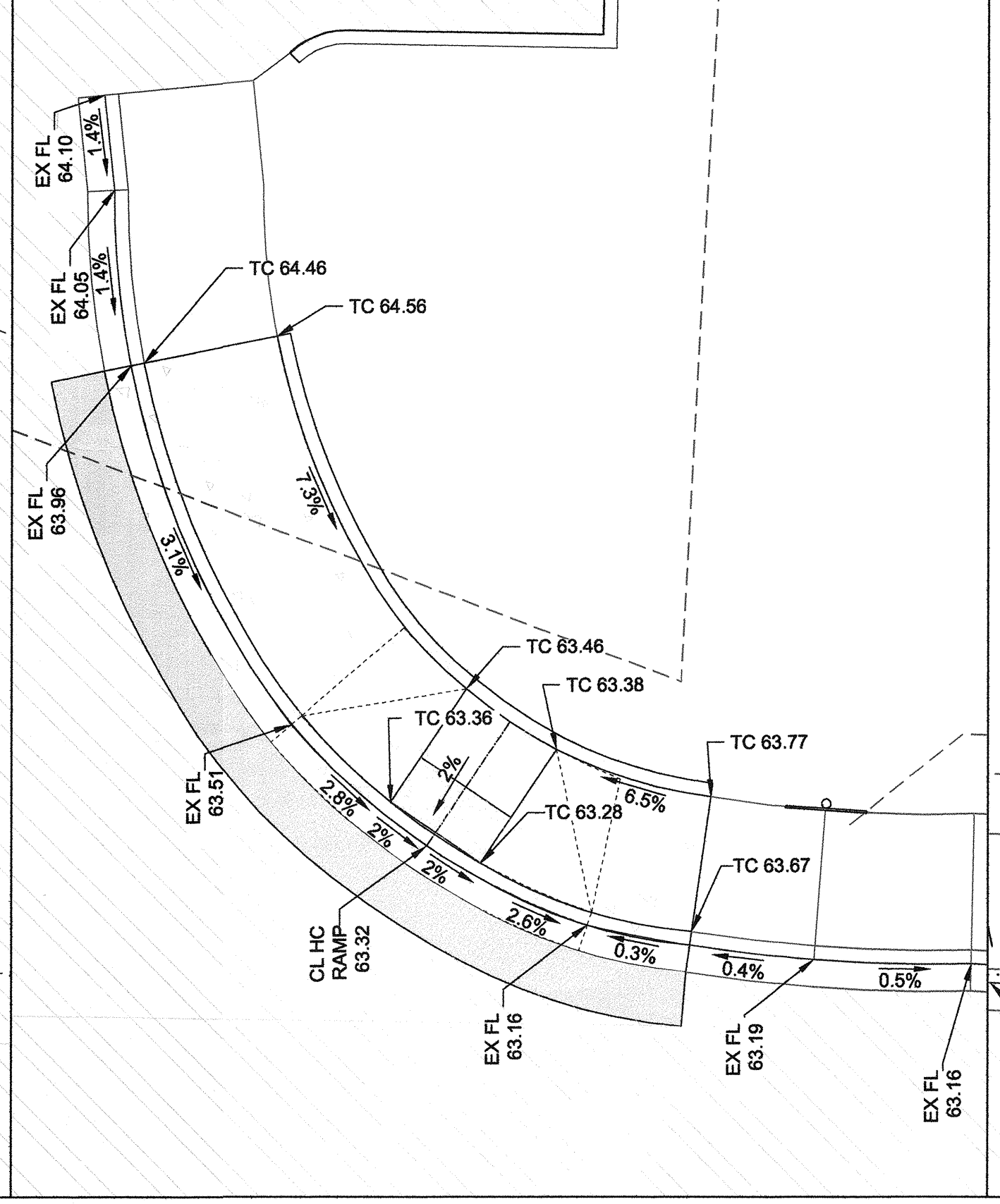
FOR:  
Cascade Christian School  
Don Johnson  
815 21st St. SE  
Puyallup, WA 98372



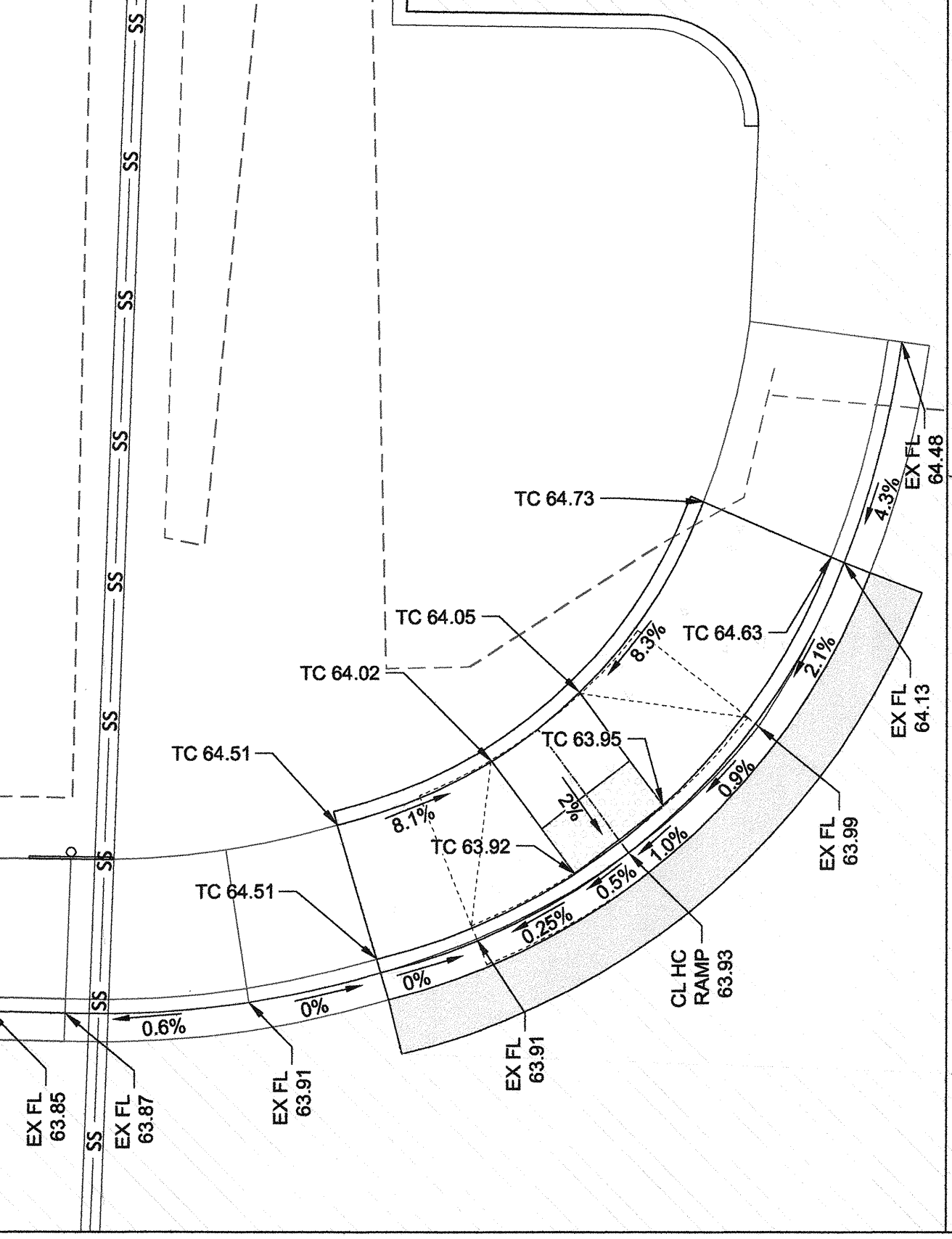
Abbey Road Group  
Land Development  
Services Company, LLC  
923 SHAW ROAD, SUITE A  
PUYALLUP, WA 98372  
P.O. Box 1224, Puyallup, WA 98371  
(253) 435-3699, Fax (253) 446-3159



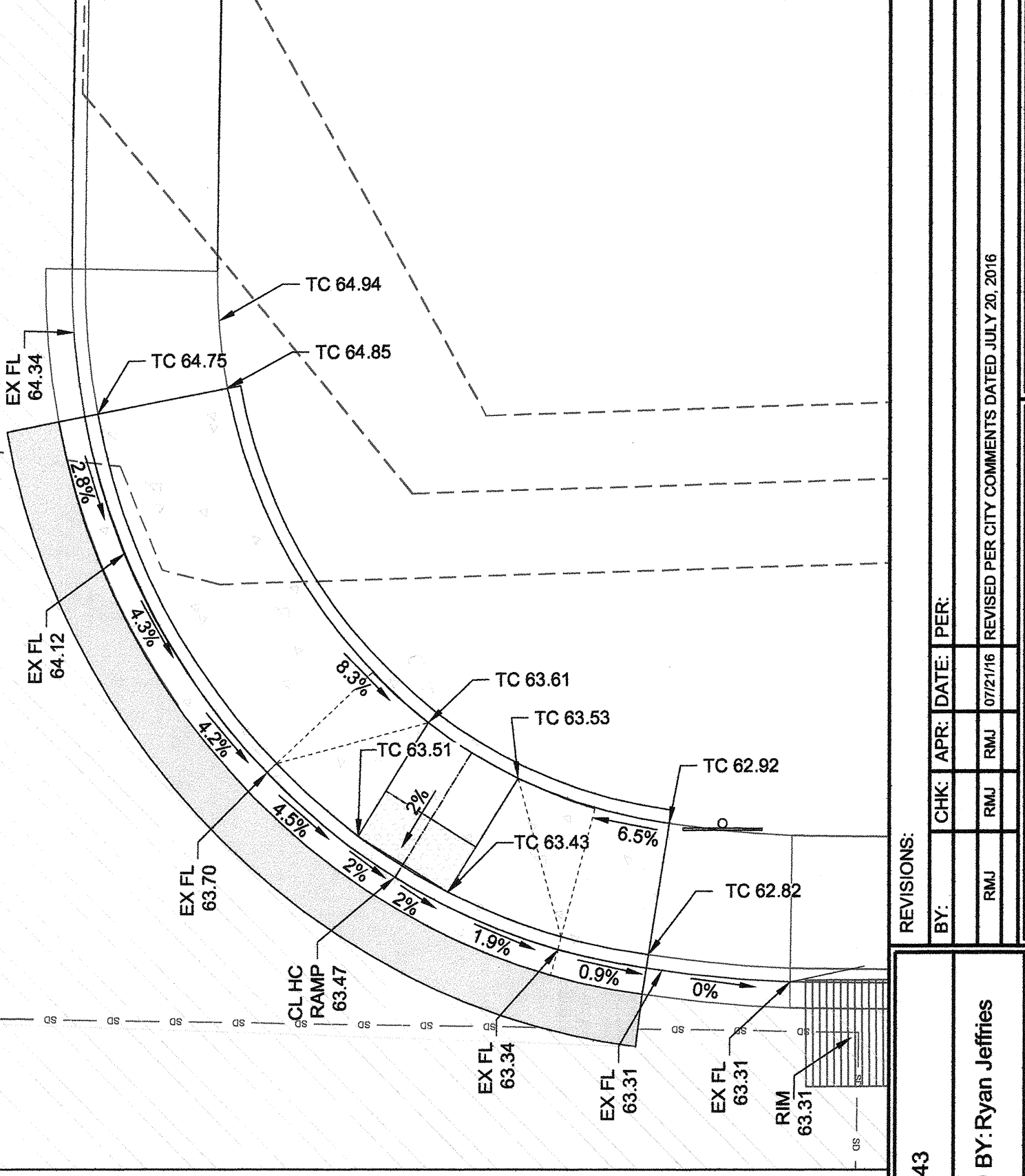
CURB RAMP DETAIL #1  
SCALE: 1"=5'



CURB RAMP DETAIL #2  
SCALE: 1"=5'



CURB RAMP DETAIL #3  
SCALE: 1"=5'

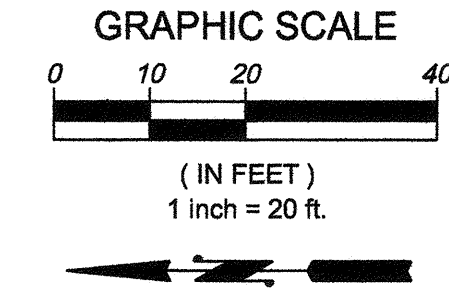


CURB RAMP DETAIL #4  
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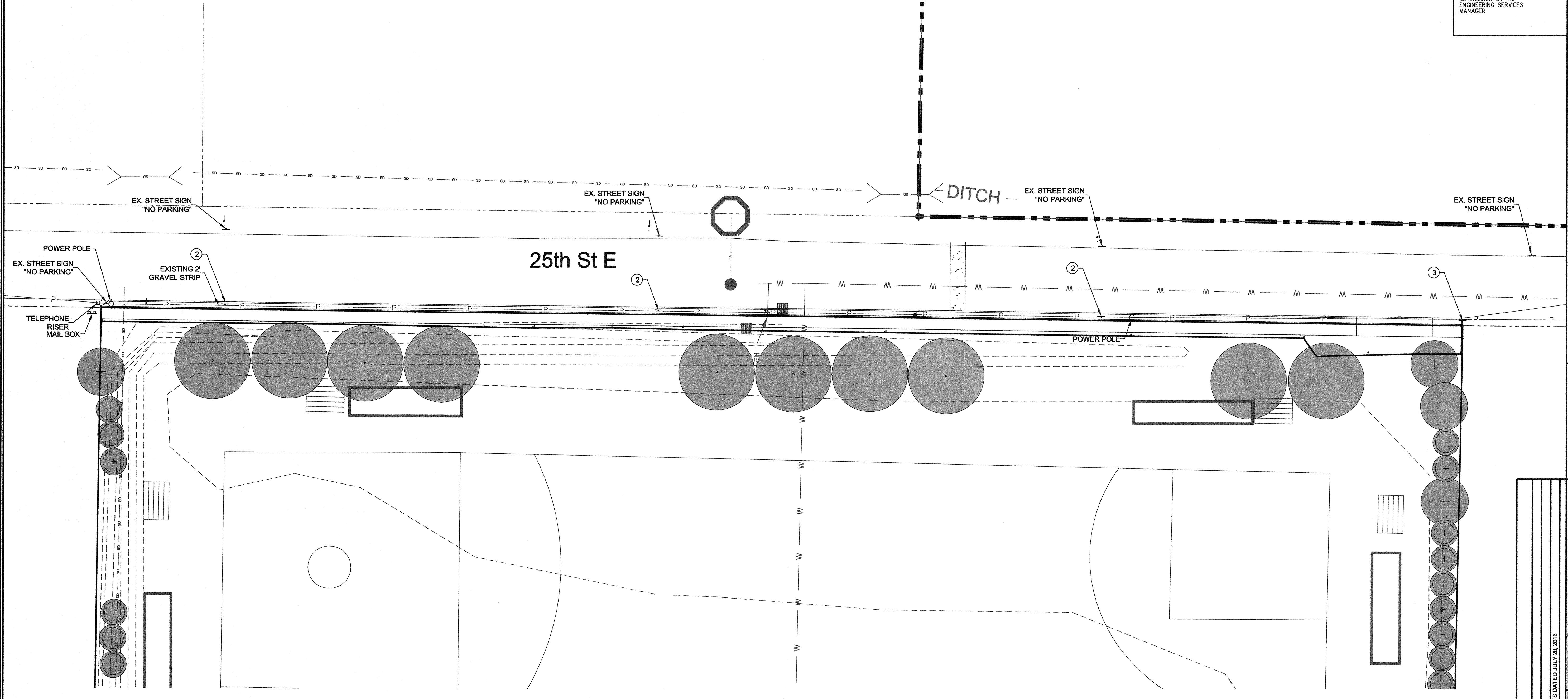
DESIGNED BY: Ryan Jeffries	REVISIONS:
APPROVED BY: Ryan Jeffries	BY: [Signature]
DRAFTED BY: Ryan Jeffries	CHK: [Signature]
DATE: 21 July 2016	DATE: [Signature]
SHEET: 04	DATE: [Signature]

File: S:\PROJECTS\FILES\ACTIVE\303-143 Cascade Christian -R SR High School\Drawings\2016 Off Site Improvement\03-143 Off Site Plans.dwg  
Plotted By: Ryan Jeffries

**CASCADE CHRISTIAN  
SEC. 35\TWP. 20\RGE. 04, W.M.  
25TH ST ROAD IMPROVEMENT PLAN**



APPROVED  
BY: *[Signature]*  
CITY OF PUYALLUP  
ENGINEERING SERVICES  
DATE: 8/4/2016  
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR 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 ENGINEERING SERVICES MANAGER.



**NOTES:**  
1. CONTRACTOR SHALL REPAIR OR RESTORE DAMAGED OR DEFACED CURBS OR SIDEWALKS TO CITY STANDARDS IF DAMAGED DURING CONSTRUCTION.

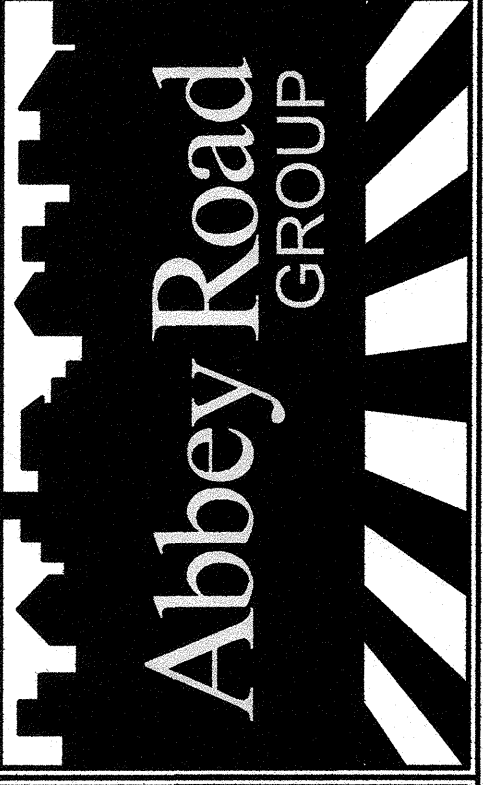
- CONSTRUCTION KEY NOTES:**
- ① CONSTRUCT NO PARKING SIGN NP-1 PER DETAIL SHEET 6.
  - ② CONSTRUCT NO PARKING SIGN NP-2 PER DETAIL SHEET 6.
  - ③ CONSTRUCT NO PARKING SIGN NP-3 PER DETAIL SHEET 6.

TITLE: Cascade Christian Off Site Improvement Set  
25th St Road Improvement Plan  
Puyallup, WA

FOR: Cascade Christian School  
Don Johnson  
815 21st St. SE  
Puyallup, WA 98372



Abbey Road Group  
Land Development  
Services Company, LLC  
923 SHAW ROAD, SUITE A  
PUYALLUP, WA 98372  
P.O. Box 1224, Puyallup, WA 98371  
(253) 435-3699, Fax (253) 446-3159



JOB #: 03-143	CHK: APR	DATE: 07/21/16	REVISED PER CITY COMMENTS DATED JULY 20, 2016
DESIGNED BY: Ryan Jeffries	RMJ	RMJ	
DEVELOPMENT REVIEW: RJ			
APPROVED BY: Ryan Jeffries			
DRAFTED BY: Ryan Jeffries			
DATE: 21 July 2016			
SHEET: 05			

File: S:\PROJECTS\FILES\ACTIVE\03-143 Cascade Christian - R SR 143\ School\Design\2016 Drawings\2016 Off Site Improvement\03-143\_05 Site Plans.dwg  
Plotted: 7/21/2016 3:22 PM  
Plotted By: Ryan Jeffries

# CASCADE CHRISTIAN SEC. 35\TWP. 20\RGE. 04, W.M. NOTES & DETAILS

APPROVED  
BY:   
CITY OF PUYALLUP  
ENGINEERING SERVICES  
DATE: 8/4/2016  
NOTE: THIS APPROVAL IS VOID  
AFTER 1 YEAR 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  
ENGINEERING SERVICES  
MANAGER

Cascade Christian  
Off Site Improvement Set  
Notes & Details  
Puyallup, WA

FOR: Cascade Christian School  
Don Johnson  
815 21st St. SE  
Puyallup, WA 98372



**GENERAL:**  
THE INTENT OF THE FOLLOWING SPECIFICATION IS TO PROVIDE A SOLAR POWER SYSTEM TO POWER AN INFORMATION DISPLAY SPEED FEEDBACK DISPLAY 24 HOURS PER DAY 7 DAYS PER WEEK, AND HAVE THE CAPABILITY OF DATA COLLECTION.

**DESCRIPTION:**  
THE PURPOSE OF THIS SPECIFICATION IS TO DESCRIBE THE MINIMUM ACCEPTABLE DESIGN FOR A SOLAR POWERED SYSTEM TO POWER A SPEED DISPLAY. THE SYSTEM WILL BE DESIGNED TO OPERATE FOR A PERIOD OF 24 HOURS PER DAY, 7 DAYS PER WEEK. THE SYSTEM SHALL BE DESIGNED TO OPERATE WITH A PROBABILITY OF NO LOSS OF LOAD DURING ALL MONTHS OF THE YEAR. THE VENDOR WILL SUPPLY DOCUMENTATION SHOWING SYSTEM DESIGN ASSUMPTIONS, PROBABILITY OF LOSS OF LOAD, ARRAY TO LOAD RATIO, AND BATTERY AUTONOMY. A SYSTEM SIMILAR TO ELTEC PART NUMBER 5890587 IS ACCEPTABLE.

**1. CABINET**  
THE CABINET SHALL BE MANUFACTURED OF 0.125" SHEET ALUMINUM. NOMINAL CABINET DIMENSIONS SHALL BE 26.25" H x 14.75" D. THE CABINET SHALL ACCOMMODATE 2 TYPE 31 BATTERIES. THE CABINET SHALL BE A TWO (2) COMPARTMENT TYPE. THE BOTTOM COMPARTMENT SHALL HAVE A NEOPRENE GASKET SEAL SO AS TO PREVENT BATTERY GASES FROM SEEPING INTO THE TOP COMPARTMENT. THE CABINET SHALL HAVE WIRE SCREENED INSECT PROOF LOUVERS ON EACH SIDE OF BOTH COMPARTMENTS FOR VENTILATION. THE LOUVERS SHALL BE DESIGNED TO NOT ALLOW ANY RAIN TO ENTER THE CABINET. ON THE BOTTOM OF THE CABINET THERE SHALL BE TWO SCREENED INSECT PROOF DRAIN HOLES.  
THE DOOR SHALL BE A SINGLE UNIT WITH A CONTINUOUS PIANO HINGE RIVETED TO THE DOOR AND THE CABINET. THE DOOR SHALL INCORPORATE A NEOPRENE GASKET WHICH, WHEN CLOSED, FORMS A SNUG WEATHER TIGHT SEAL. THE DOOR LOCK SHALL BE A STANDARD POLICE LOCK, REINFORCED WITH A STEEL PLATE.  
EACH CABINET SHALL BE EQUIPPED WITH THE NECESSARY RIGID TOP AND BOTTOM MOUNT FOR A 4" ID POLE WITH 4.5" OD POLE CLAMPS. ALL NECESSARY HARDWARE FOR PROPER MOUNTING SHALL BE INCLUDED.

**2. CONTROL PANEL**  
THE CONTROL PANEL CONTAINING THE ELECTRONICS (SOLAR CHARGE CONTROLLER) SHALL BE MOUNTED IN THE TOP COMPARTMENT OF THE CABINET USING BOLTS WITH WING NUTS FOR QUICK AND EASY REMOVAL. THE SOLAR PANEL BEACON AND BATTERY SHALL BE CONNECTED THROUGH A MAIN WIRING HARNESS VIA A CIRCULAR PIN CONNECTOR (CPC).  
THE SOLAR PANELS, LOAD, AND BATTERY SHALL BE FUSED FOR SHORT CIRCUIT PROTECTION AND EASE OF SYSTEM MAINTENANCE.  
THE SOLAR CHARGE CONTROLLER SHALL CONTROL BATTERY CHARGING THROUGH PULSE WIDTH, MODULATED, TEMPERATURE COMPENSATING, CONSTANT CHARGING ALGORITHM. THE SOLAR CHARGE CONTROLLER WILL HAVE BOTH A LOW VOLTAGE DISCONNECT (LVD) OF 11.4 VDC AND A HIGH VOLTAGE DISCONNECT OF 15.5 VDC. A LIQUID CRYSTAL DISPLAY (LCD) OF BATTERY VOLTAGE, SOLAR ARRAY CURRENT, AND LOAD CURRENT WILL BE AVAILABLE WITH THE SOLAR CHARGE CONTROLLER. IN ADDITION, COLORED LED'S WILL DISPLAY BATTERY STATE. A GREEN LED WILL INDICATE FULL CHARGE, AMBER LED WILL INDICATE HALF CHARGE, AND A FLASHING RED LED WILL INDICATE LOW CHARGE. A SOLID GLOWING RED LED WILL INDICATE THE LOAD HAS BEEN DISCONNECTED. A SEPARATE GREEN LED WILL INDICATE THE BATTERY IS BEING CHARGED.  
THE SOLAR CHARGE CONTROLLER WILL HAVE A LOAD DISCONNECT PUSHBUTTON. WHEN THE LOAD IS DISCONNECTED THE BUTTON WILL GLOW RED.  
THE SOLAR CHARGE CONTROLLER WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF -40 DEGREES C AND +85 DEGREES C.

<b>CITY OF PUYALLUP</b>	<b>SOLAR POWERED ACTIVE SPEED DISPLAY SIGN NOTES</b>
DESIGNED BY: JIM BEVINS/SVORODA CHECKED BY: LINDA LIAN APPROVED BY: COLLEEN HARRIS DATE APPROVED: 07/21/16 FILE NAME: P:\P\03\COMMON\STDCITY\STDR\01\01.07.01	CITY STANDARD SCALE: 1:1 01.07.01

**GENERAL:**  
THE INTENT OF THE FOLLOWING SPECIFICATION IS TO PROVIDE A COMPLETE, READY TO INSTALL, 2-WAY PAGING CONTROL, SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM.

**DESCRIPTION:**  
THE PURPOSE OF THIS SPECIFICATION IS TO DESCRIBE THE MINIMUM ACCEPTABLE DESIGN FOR A 2-WAY PAGING SOLAR POWERED, DUAL BEACON SCHOOL ZONE FLASHING BEACON SYSTEM. THE SYSTEM WILL BE DESIGNED TO OPERATE FOR A PERIOD OF 4 HOURS PER DAY, 5 DAYS PER WEEK. THE SYSTEM SHALL BE DESIGNED TO OPERATE WITH A PROBABILITY OF NO LOSS OF LOAD DURING ALL MONTHS OF THE YEAR.

**1. CABINET**  
THE CABINET SHALL BE MANUFACTURED OF 0.125" SHEET ALUMINUM. NOMINAL CABINET DIMENSIONS SHALL BE 26.25" H x 15.5" W x 14.75" D. THE CABINET SHALL BE A TWO (2) COMPARTMENT TYPE. THE BOTTOM COMPARTMENT SHALL HAVE A NEOPRENE GASKET SEAL SO AS TO PREVENT BATTERY GASES FROM SEEPING INTO THE TOP COMPARTMENT. THE CABINET SHALL HAVE WIRE SCREENED INSECT PROOF LOUVERS ON EACH SIDE OF BOTH COMPARTMENTS FOR VENTILATION. THE LOUVERS SHALL BE DESIGNED TO NOT ALLOW ANY RAIN TO ENTER THE CABINET. ON THE BOTTOM OF THE CABINET THERE SHALL BE TWO SCREENED INSECT PROOF DRAIN HOLES.  
THE DOOR SHALL BE A SINGLE UNIT WITH A CONTINUOUS PIANO HINGE RIVETED TO THE DOOR AND THE CABINET. THE DOOR SHALL INCORPORATE A NEOPRENE GASKET WHICH, WHEN CLOSED, FORMS A SNUG WEATHER TIGHT SEAL. THE DOOR LOCK SHALL BE A STANDARD POLICE LOCK, REINFORCED WITH A STEEL PLATE.  
EACH CABINET SHALL BE EQUIPPED WITH THE NECESSARY RIGID TOP AND BOTTOM MOUNT FOR A 4" ID POLE WITH 4.5" OD POLE CLAMPS. ALL NECESSARY HARDWARE FOR PROPER MOUNTING SHALL BE INCLUDED.

**2. CONTROL PANEL**  
THE CONTROL PANEL CONTAINING THE ELECTRONICS (SOLAR CHARGE CONTROLLER AND FLASHER) AND 2-WAY PAGING TIME CLOCK SHALL BE MOUNTED IN THE TOP COMPARTMENT OF THE CABINET USING BOLTS WITH WING NUTS FOR QUICK AND EASY REMOVAL. THE SOLAR PANEL BEACON AND BATTERY SHALL BE CONNECTED THROUGH A MAIN WIRING HARNESS VIA A CIRCULAR PIN CONNECTOR (CPC).  
THE SOLAR PANELS, LOAD, AND BATTERY SHALL BE FUSED FOR SHORT CIRCUIT PROTECTION AND EASE OF SYSTEM MAINTENANCE.

**SOLAR CHARGE CONTROLLER**  
THE SOLAR CHARGE CONTROLLER SHALL CONTROL BATTERY CHARGING THROUGH PULSE WIDTH, MODULATED, TEMPERATURE COMPENSATING, CONSTANT CHARGING ALGORITHM. THE SOLAR CHARGE CONTROLLER WILL HAVE BOTH A LOW VOLTAGE DISCONNECT (LVD) OF 11.4 VDC AND A HIGH VOLTAGE DISCONNECT (HVD) OF 15.5 VDC. A LIQUID CRYSTAL DISPLAY (LCD) OF BATTERY VOLTAGE, SOLAR ARRAY CURRENT, AND LOAD CURRENT WILL BE AVAILABLE WITH THE SOLAR CHARGE CONTROLLER. IN ADDITION, COLORED LED'S WILL DISPLAY BATTERY STATE. A GREEN LED WILL INDICATE FULL CHARGE, AMBER LED WILL INDICATE HALF CHARGE, AND A FLASHING RED LED WILL INDICATE LOW CHARGE. A SOLID GLOWING RED LED WILL INDICATE THE LOAD HAS BEEN DISCONNECTED. A SEPARATE GREEN LED WILL INDICATE THE BATTERY IS BEING CHARGED.  
THE SOLAR CHARGE CONTROLLER WILL HAVE A LOAD DISCONNECT PUSHBUTTON. WHEN THE LOAD IS DISCONNECTED THE BUTTON WILL GLOW RED.

<b>CITY OF PUYALLUP</b>	<b>SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM NOTES</b>
DESIGNED BY: JIM BEVINS/SVORODA CHECKED BY: LINDA LIAN APPROVED BY: COLLEEN HARRIS DATE APPROVED: 07/21/16 FILE NAME: P:\P\03\COMMON\STDCITY\STDR\01\01.07.03	CITY STANDARD SCALE: 1:1 01.07.03

THE SOFTWARE WILL ALLOW THE USER TO CHANGE THE EMAIL ADDRESS TO WHICH THE UNIT RESPONDS, TO SEND AN ANNUAL PROGRAM WITH EXCEPTIONS, TO SEND AN ALTERNATE PROGRAM, TO SEND AN IMMEDIATE PROGRAM, TO TURN ON OR TURN OFF THE RELAYS MANUALLY, TO SEND A TIME UPDATE, OR TO QUERY THE UNITS REGARDING STATUS (DATE, TIME, UNIT IDENTIFICATION, PROGRAM RUNNING, AND RELAY STATE).

**4. SOLAR PANEL**  
THE SOLAR PANEL WILL BE HIGH EFFICIENCY, SINGLE CRYSTAL SILICON SOLAR CELLS THAT ARE LAMINATED TO GLASS WITH LAYERS OF ETHYLENE VINYL ACETATE (EVA). THE PANEL WILL BE SELF-CLEANING, IMPACT RESISTANT, HIGHLY TRANSMISSIVE, TEMPERED GLASS SUPERSTATE. THE PANEL MODULE FRAME WILL BE MADE OF EXTRUDED, POLYMER COATED ALUMINUM ALLOY OR SIMILAR APPROVED CONSTRUCTION. THE PANEL MODULE JUNCTION BOX WILL BE A UV RESISTANT, WEATHERPROOF WIRE TERMINATION SYSTEM WHICH HANDLES #14 AWG WIRING. THE MINIMUM ACCEPTABLE WATTAGE OF THE SOLAR PANEL WILL BE 85 WATTS.

**5. BATTERIES**  
THE BATTERIES WILL BE A TYPE 27 ABSORBED GLASS MAT (AGM) LEAD ACID TYPE 12 VOLT DC BATTERY. THE BATTERIES WILL CONTAIN VALVE REGULATION WITH A SELF DISCHARGE RATE OF 1% PER MONTH OR LESS (AT 68 DEGREES F). THE BATTERIES WILL UTILIZE T81 TERMINALS. THE POSITIVE TERMINAL WILL BE COVERED WITH A RUBBER BOOT TO PROTECT THE BATTERIES FROM ACCIDENTAL SHORTING.

**6. SIGNAL BEACON**  
THE SIGNAL BEACONS WILL CONSIST OF THE HEAD, AMBER LENS, VISOR, SIGNAL CLOSURE CAP, AND MOUNTING HARDWARE FOR A 4.5" OD ALUMINUM POLE. THE LENS WILL BE A 12000 12" AMBER LED BEACON USING ALUMINUM TECHNOLOGY. THE HEAD WILL BE A ONE PIECE POLYCARBONATE SHELL WITH THE POLYCARBONATE DOOR USING STAINLESS STEEL HINGE PINS. THUMBSCREWS WILL HOLD THE DOOR AGAINST THE BODY. THE VISOR SHALL BE A ONE PIECE POLYCARBONATE TUNNEL UNIT WHICH SHALL BE DURALOCKED AT FOUR POINTS TO THE HEAD DOOR.  
THE SIGNAL BEACON WILL BE ASSEMBLED AND WIRED AS A UNIT.

**7. POLE AND BASE**  
THE POLE WILL BE A SCHEDULE 80 SPUN ALUMINUM 4" ID (4.5" OD) x 16' H. THE BASE WILL BE A BREAKAWAY BASE SIMILAR TO PELCO PART NUMBER PB-5340. A SET OF 4 ANCHOR BOLTS WILL BE PROVIDED. THE ANCHOR BOLTS WILL BE 3/4" x 10" AND WILL BE SIMILAR TO PELCO PART NUMBER PB-5306. A POLE COLLAR ASSEMBLY AND A POLE CAP WILL ALSO BE PROVIDED.

**8. WARRANTY**  
A MINIMUM OF ONE YEAR WARRANTY FROM THE DATE OF SYSTEM INSTALLATION WILL BE REQUIRED FOR ALL SYSTEM COMPONENTS. THE BATTERY WILL BE PRO-RATED WARRANTED FOR 5 YEARS. THE SOLAR PANEL WILL BE WARRANTED FOR 20 YEARS. ALL SHIPPING COSTS FOR WARRANTY REPAIRS WILL BE PAID BY THE VENDOR.

<b>CITY OF PUYALLUP</b>	<b>SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM NOTES</b>
DESIGNED BY: JIM BEVINS/SVORODA CHECKED BY: LINDA LIAN APPROVED BY: COLLEEN HARRIS DATE APPROVED: 07/21/16 FILE NAME: P:\P\03\COMMON\STDCITY\STDR\01\01.07.05	CITY STANDARD SCALE: 1:1 01.07.05

**3. SOLAR PANEL**  
THE SOLAR PANEL(S) WILL BE HIGH EFFICIENCY, SINGLE CRYSTAL SILICON SOLAR CELLS THAT ARE LAMINATED TO GLASS WITH LAYERS OF ETHYLENE VINYL ACETATE (EVA). THE PANEL WILL BE SELF-CLEANING, IMPACT RESISTANT HIGHLY TRANSMISSIVE, TEMPERED GLASS SUPERSTATE. THE PANEL MODULE FRAME WILL BE MADE OF EXTRUDED, POLYMER COATED ALUMINUM ALLOY OR SIMILAR APPROVED CONSTRUCTION. THE PANEL MODULE JUNCTION BOX WILL BE A UV RESISTANT, WEATHERPROOF WIRE TERMINATION SYSTEM WHICH HANDLES #18 AWG - #8 AWG WIRING. THE MINIMUM ACCEPTABLE WATTAGE OF THE SOLAR PANEL WILL BE 250 WATTS.

**4. BATTERIES**  
THE 2 BATTERIES WILL BE TYPE 31 ABSORBED GLASS MAT (AGM) LEAD ACID TYPE 12 VOLT DC BATTERIES. THE BATTERIES WILL CONTAIN VALVE REGULATION WITH A SELF DISCHARGE RATE OF 1% PER MONTH OR LESS (AT 68 DEGREES F). THE BATTERIES WILL UTILIZE T81 TERMINALS. THE POSITIVE TERMINALS WILL BE COVERED WITH A RUBBER BOOT TO PROTECT THE BATTERY FROM ACCIDENTAL SHORTING.

**5. POLE AND BASE**  
THE POLE WILL BE A SCHEDULE 80 SPUN ALUMINUM 4" ID (4.5" OD) x 16' H. THE BASE WILL BE A BREAKAWAY BASE SIMILAR TO PELCO PART NUMBER PB-5340. A SET OF 4 ANCHOR BOLTS WILL BE PROVIDED. THE ANCHOR BOLTS WILL BE 3/4" x 10" AND WILL BE SIMILAR TO PELCO PART NUMBER PB-5306. A POLE COLLAR ASSEMBLY AND A POLE CAP WILL ALSO BE PROVIDED. POLE COLLAR SHALL BE WELDED TO POLE AND BASE AFTER ASSEMBLY.

**6. WARRANTY**  
A MINIMUM OF ONE YEAR WARRANTY FROM THE DATE OF SYSTEM INSTALLATION WILL BE REQUIRED FOR ALL SYSTEM COMPONENTS. THE BATTERY WILL BE PRO-RATED WARRANTED FOR 5 YEARS. THE SOLAR PANEL WILL BE WARRANTED FOR 20 YEARS. ALL SHIPPING COSTS FOR WARRANTY REPAIRS WILL BE PAID BY THE VENDOR.

**7. POLE FOUNDATION**  
FOUNDATION SHALL BE 36" ROUND AND 36" DEEP WITH 3-#4 REBAR HOOPS AND 4-#4 REBAR VERTICALS. REBAR SHALL NOT TOUCH FOUNDATION HOLE SIDES OR BOTTOM AND SHALL HAVE TOOL FINISHED EDGES. CONCRETE SHALL BE CLASS 5 (1-1/2) CONCRETE.

<b>CITY OF PUYALLUP</b>	<b>SOLAR POWERED ACTIVE SPEED DISPLAY SIGN NOTES (2)</b>
DESIGNED BY: JIM BEVINS/SVORODA CHECKED BY: LINDA LIAN APPROVED BY: COLLEEN HARRIS DATE APPROVED: 07/21/16 FILE NAME: P:\P\03\COMMON\STDCITY\STDR\01\01.07.02	CITY STANDARD SCALE: 1:1 01.07.02

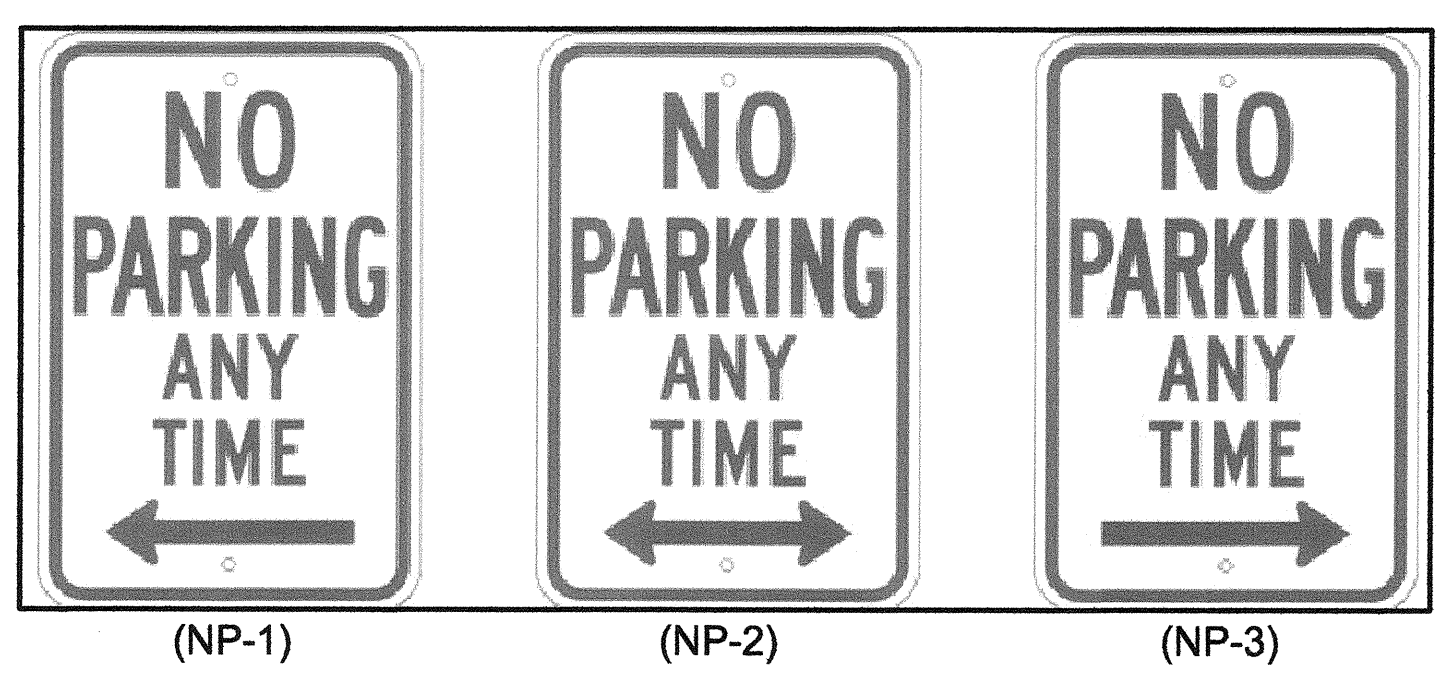
THE SOLAR CHARGE CONTROLLER WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF -40 DEGREES C AND +85 DEGREES C.

**FLASHER**  
THE FLASHER SHALL BE SOLID STATE, 2 CIRCUIT DEVICE WHICH CONTROLS THE FLASHING SEQUENCE OF THE BEACON. THE FLASHER WILL HAVE A SELECTABLE FLASH RATE OF 35-70 FLASHES PER MINUTE AND WILL FLASH A DUTY CYCLE OF 50% ON AND 50% OFF.  
THE FLASHER WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF -40 DEGREES C AND +85 DEGREES C.

**3. 2-WAY PAGING TIME CLOCK**  
THE 2-WAY PAGING TIME CLOCK WILL CONTAIN BOTH THE CAPABILITY OF RECEIVING PAGES FROM A CENTRAL LOCATION AND RESPONDING VIA EMAIL TO A DESIGNATED ADDRESS. THE 2-WAY PAGING TIME CLOCK WILL BE ABLE TO RECEIVE AND STORE AN ANNUAL PROGRAM OF UP TO 999 CHARACTERS INCLUDING STEPS AND EXCEPTIONS, AN ALTERNATE PROGRAM, AND AN IMMEDIATE PROGRAM. THE 2-WAY PAGING TIME CLOCK WILL SELECT THE APPROPRIATE PROGRAM AND/OR EXCEPTION FOR TODAY AND WILL RUN THAT PROGRAM. THE 2-WAY PAGING TIME CLOCK WILL ALSO HAVE THE CAPABILITY OF BEING PROGRAMMED VIA A KEY PAD ON THE TIME CLOCK.  
THE 2-WAY PAGING TIME CLOCK WILL CONTAIN WATCH DOG CIRCUITS TO ENSURE THAT THE CLOCK RESETS ITSELF SHOULD IT FAULT FOR A PERIOD GREATER THAN SPECIFIED. THE CLOCK WILL CONTAIN 2 OUTPUT CIRCUITS, EACH CIRCUIT RATED AT 16 AMPS. THE CLOCK WILL BE CAPABLE OF BEING POWERED BY EITHER DC OR AC POWER. THE CLOCK WILL CONTAIN NON-VOLATILE MEMORY SO THAT A POWER FAILURE WILL NOT ERASE THE PROGRAM. THE CLOCK WILL HAVE CAPACITIVE BACKUP POWER RATED AT 168 HOURS IN THE EVENT OF POWER FAILURE. THE CLOCK WILL BE CAPABLE OF LEAP YEAR COMPENSATION AND WILL AUTOMATICALLY COMPENSATE FOR DAYLIGHT SAVINGS TIME.  
SYSTEM SOFTWARE WILL BE PROVIDED FOR OPERATION OF THE SYSTEM. FUNCTIONS AND FEATURES OF THE SOFTWARE ARE DESCRIBED IN SECTION 3.1.  
THE 2-WAY PAGING TIME CLOCK WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF -40 DEGREES C AND +85 DEGREES C

**3.1 2-WAY PAGING SYSTEM SOFTWARE**  
THE 2-WAY PAGING SYSTEM SOFTWARE WILL RUN ON A STANDARD PC USING A WINDOWS 2000, XP, OR VISTA OPERATING SYSTEM.  
THE SOFTWARE WILL HAVE THE CAPABILITY TO ASSIGN 99 GROUPS WITH 99 UNITS PER GROUP. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN ANNUAL PROGRAM WITH EXCEPTIONS FOR EACH GROUP AND WILL ALLOW THE USER TO COPY PROGRAMS FROM ONE GROUP TO ANOTHER GROUP. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN ALTERNATE PROGRAM WHICH OVERRIDES THE ANNUAL PROGRAM FOR A SPECIFIED PERIOD. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN IMMEDIATE EXECUTABLE PROGRAM WHICH OPERATES ONLY ON THE DATE OF THE PROGRAM. THE SOFTWARE WILL ALSO ALLOW THE USER TO CONTROL THE CLOCK MANUALLY.  
THE SOFTWARE WILL ALLOW THE USER TO PRINT A HARDCOPY LISTING OF ALL SCHOOL PROGRAMS. IT WILL ALLOW THE USER TO PRINT A LISTING OR ALL REMOTE SITES. IT WILL MAINTAIN A HISTORY OF THE LAST 500 PAGE MESSAGES SENT TO REMOTE UNITS.  
THE SOFTWARE WILL ALLOW THE USER TO ADDRESS AND SEND A PAGE MESSAGE TO ALL UNITS WITH ONE COMMAND, ANY GROUP OF UNITS WITH ONE COMMAND, OR A SINGLE UNIT WITH ONE COMMAND.

<b>CITY OF PUYALLUP</b>	<b>SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM NOTES</b>
DESIGNED BY: JIM BEVINS/SVORODA CHECKED BY: LINDA LIAN APPROVED BY: COLLEEN HARRIS DATE APPROVED: 07/21/16 FILE NAME: P:\P\03\COMMON\STDCITY\STDR\01\01.07.04	CITY STANDARD SCALE: 1:1 01.07.04



STANDARD  
NO PARKING SIGNS

REVISIONS: BY: _____ DATE: _____ PER: _____ APR: _____ REVISED PER CITY COMMENTS DATED JULY 20, 2016 MAY: _____ JUN: _____ JUL: _____	DESIGNED BY: Ryan Jeffries DEVELOPMENT REVIEW: RJ APPROVED BY: Ryan Jeffries DRAFTED BY: Ryan Jeffries DATE: 21 July 2016 SHEET: 6
Abbey Road Group Land Development Services Company, LLC 923 SHAW ROAD, SUITE A PUYALLUP, WA 98372 P.O. Box 1224, Puyallup, WA 98371 (253) 435-3699, Fax (253) 446-3159	

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Plotted By: Ryan Jeffries  
Plotter: 7/21/2016 3:46 PM

