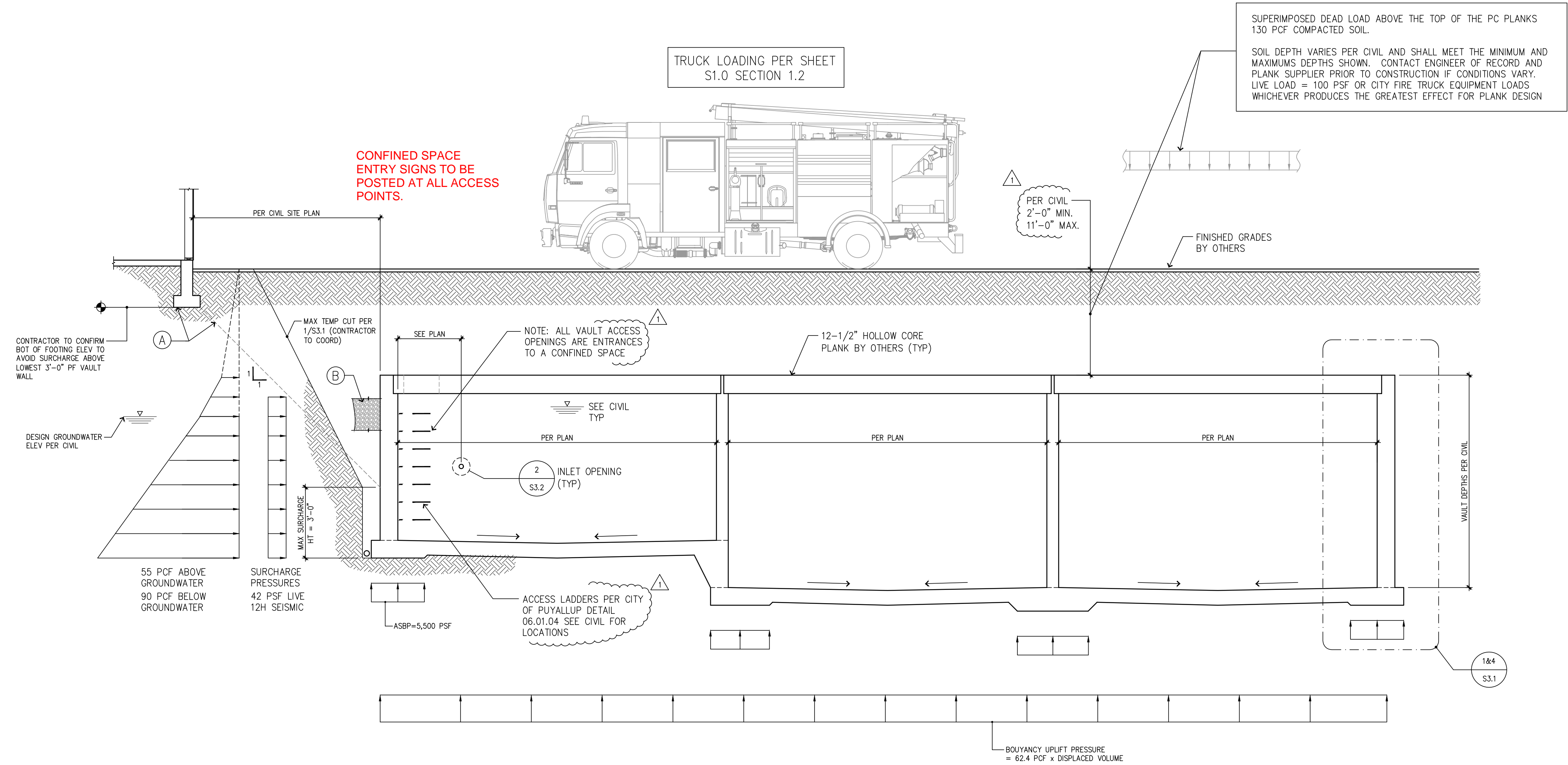






CAD FILE: F:\Projects\2023 Projects\23.007 Bradley Heights\Drawings\Detention Vault\S1.1.dwg PLOT DATE/TIME: 3/26/2025 - 3:15pm THANK YOU FOR USING SOLUTIONS 4 STRUCTURES

- (A) TEMPORARY SLOPES PER SOILS ENGINEER. SEE DETAIL 10/S3.1 FOR EXCAVATION NOTES AND MINIMUM BUILDING OFFSETS.
- (B) COMPLETION OF BACKFILL SHALL NOT BEGIN UNTIL AFTER PLANKS ARE PLACED AND GROUTED PER SECTION 1/S3.1 METHODS AND MATERIALS SHALL BE COORDINATED BETWEEN THE SOILS ENGINEER AND THE CONTRACTOR AND SHALL NOT RESULT IN OUT OF PLANE PRESSURES EXCEEDING THE LIMITS NOTED.
- (C) DE-WATERING REQUIRED DURING CONSTRUCTION SHALL REMAIN UNTIL FINAL GRADE MATERIAL HAS BEEN PLACED ABOVE THE PLANKS.



### Vault Design Loading

NTS

| City of Puyallup<br>Development & Permitting Services<br>ISSUED PERMIT |          |             |              |
|------------------------------------------------------------------------|----------|-------------|--------------|
| Building                                                               | Planning | Engineering | Public Works |
| Fire                                                                   | Traffic  |             |              |

PROJECT NO. : 23.007  
DESIGNED BY : MRO  
DRAWN BY : RSO  
ISSUE DATE : 8-16-24  
LATEST REV. OF DWG. SET : 3-20-25

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION  
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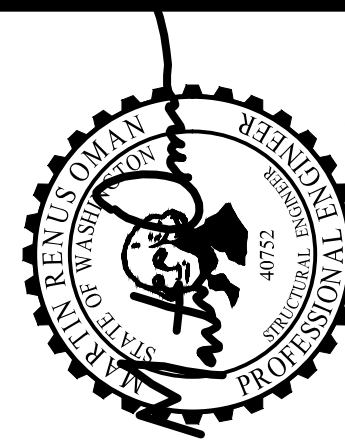
**Bradley Heights Apartments**  
Detention Vaults 2, 3, & 4  
202 27th Ave SE  
Puyallup, Washington

PRRWF20250237

**Solutions 4 Structures**  
A Structural Engineering Corporation

Puyallup, Washington 98374  
Ph 253-314-9822  
www.solutions4structures.com

Revisions to this sheet:  
3-20-2025 REVISIONS PER CITY REVIEW COMMENTS



THOMAS L. CHASE, PE  
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OLEG G. KONDRATYUK, PE

# S1.1

CAD FILE: F:\Projects\2023 Projects\Drawings\Drawings\Detention Vault\S2.2.dwg PLOT DATE/TIME: 5/12/2025 - 1:27pm THANK YOU FOR USING SOLUTIONS 4 STRUCTURES

- Plank Framing Notes - Vault 4
1. TOW = TOP OF WALL ELEVATION (ALSO BOTTOM OF PLANKS)  
= 398.50'

2. TOF = VARIES SEE CIVIL

3. TOP OF VAULT FRAMING TYPICALLY CONSISTS OF SIMPLE SPAN 12-1/2" PRECAST PRE-STRESSED HOLLOW CORE PLANKS TO BE DESIGNED BY OTHERS TO CARRY ALL DESIGN LOADS AS SHOWN ON SHEET S1.1

4. FLOOR PLANK LOCATIONS ARE SCHEMATICALLY SHOWN ON THE PLANS. IT IS NOT THE INTENT OF THE STRUCTURAL PLANS TO GRAPHICALLY LOCATE ALL FRAMING MEMBERS. THE CONTRACTOR IS RESPONSIBLE FOR SPACING FRAMING MEMBERS AS NOTED ON THE PLANS AND GENERATING MEMBER LAYOUTS FOR SHOP DRAWINGS AND QUANTITY TAKEOFFS.

5. REFER TO SHEET S3.1 FOR TYPICAL PLANK CONNECTION DETAILS

6. CONTRACTOR SHALL VERIFY AND COORDINATE ALL OPENINGS THROUGH THE PLANK FRAMING ASSEMBLY. SEE SHEET S3.2 FOR RELATED DETAILS.

7. ALL BACKFILL SHALL NOT BEGIN UNTIL AFTER PLANKS ARE PLACED AND GROUTED. METHODS AND MATERIALS SHALL BE COORDINATED BETWEEN THE SOILS ENGINEER AND THE CONTRACTOR AND SHALL NOT RESULT IN OUT OF PLANE PRESSURES EXCEEDING THE LIMITS NOTED.

8. SEE THE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR ADDITIONAL INFORMATION.

CONTRACTOR NOTE

Engineer shall review and approve plank shop drawings prior to install. Engineer will provide a letter of approval of shop drawing prior to install. Engineer's letter will be present at time of inspection.

NOTE:

Review Geotechnical Engineering Report regarding Temporary Excavations prior to commencement of work.

- Foundation Notes - Vault 4
1. TOF ELEVATIONS VARY (SEE PLAN)

2. TYPICAL DIMENSIONS ARE TO FACE OF WALL OR TO CENTERLINE OF COLUMN OR FOOTING. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT.

3. PROVIDE MAT FOOTING SUBSTRATE PREPARATION PER THE SOILS REPORT.

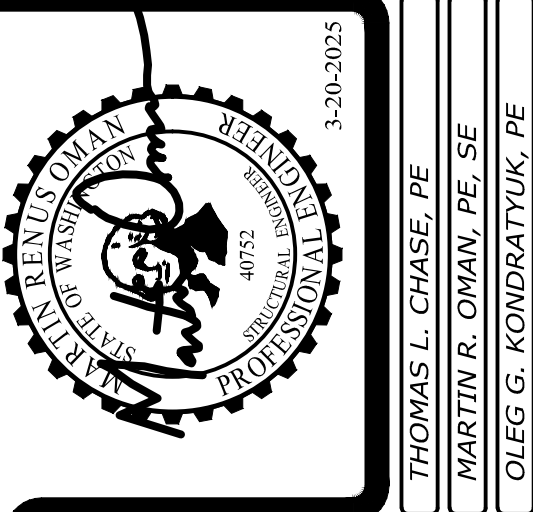
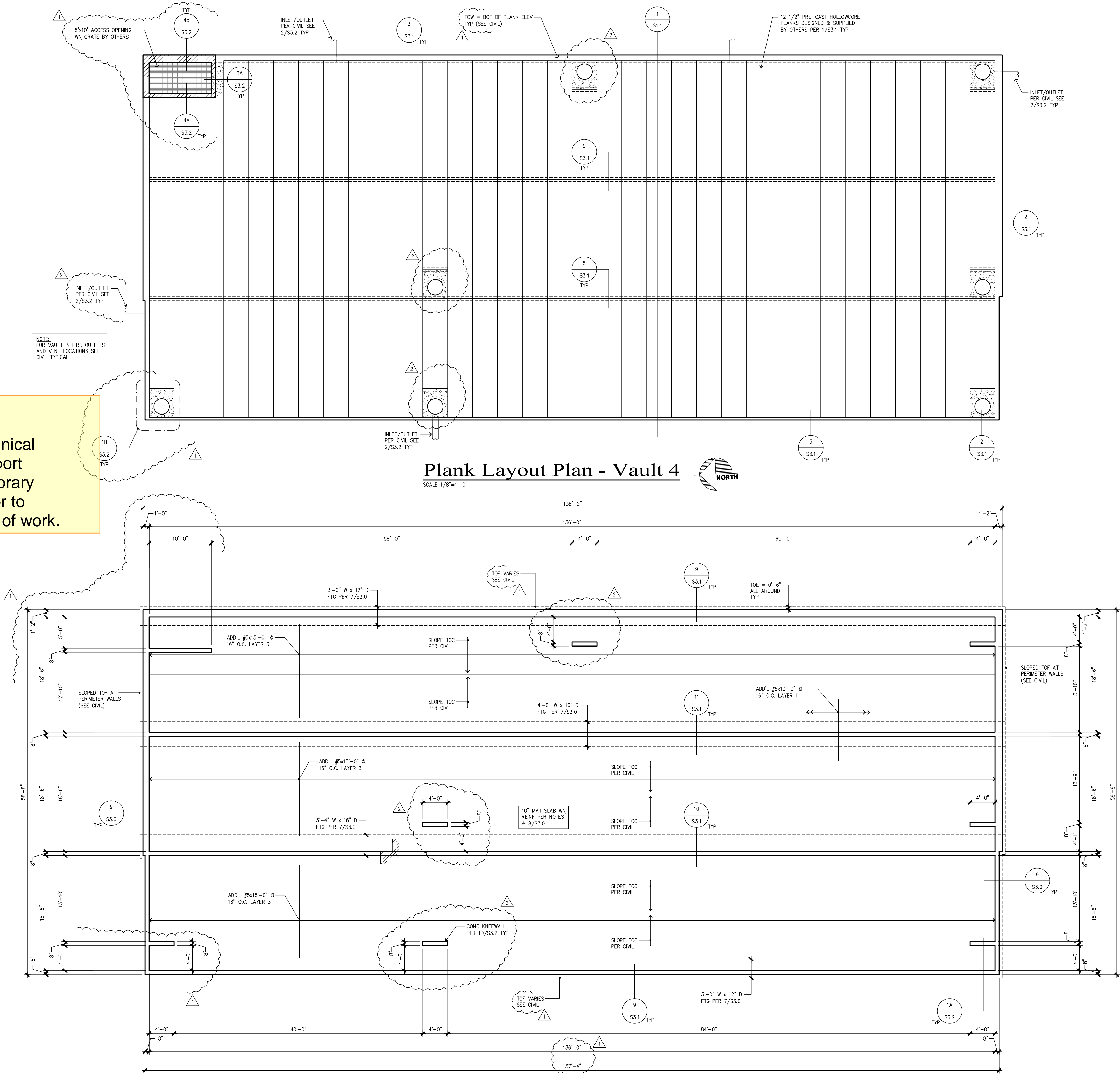
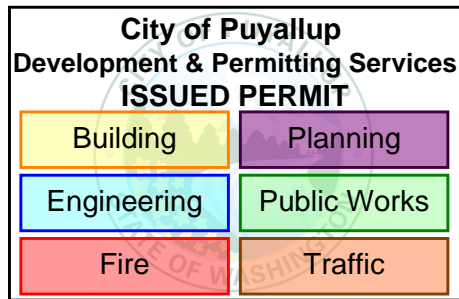
4. ALL FOOTING DOWELS = SAME SIZE AND SPACING AS VERT WALL REINF TYPICAL

5. 10" THICK MAT SLAB W/ #5 @ 16" O.C. EA WAY PER 8/S3.0 & ADD'L REINFORCEMENT PER PLAN TYP.

6. PROVIDE 36"x36" CORNER BARS AT ALL WALL/FOOTING INTERSECTIONS AND CORNERS TO MATCH ALL HORIZONTAL REINFORCEMENT.

7. DO NOT BACKFILL PERIMETER CONC WALLS UNTIL PLANK ASSEMBLY HAS BEEN PLACED AND GROUTED.

8. SEE THE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR ADDITIONAL INFORMATION.



Revisions to this sheet:

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PROJECT NO. : 23.007

DESIGNED BY : MRO

DRAWN BY : RSO

ISSUE DATE : 8-16-24

LATEST REV. OF DWG. SET : 3-20-25

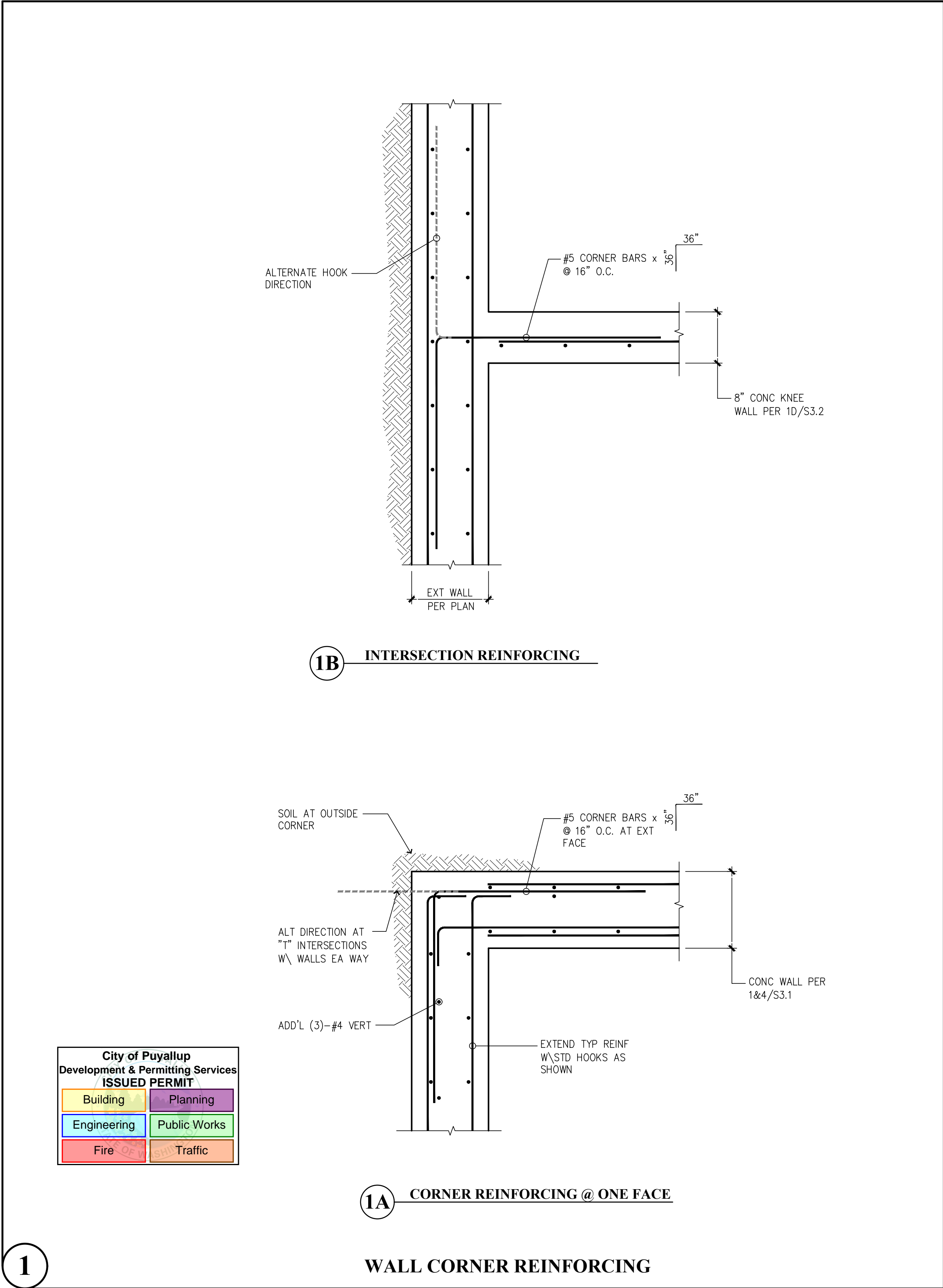
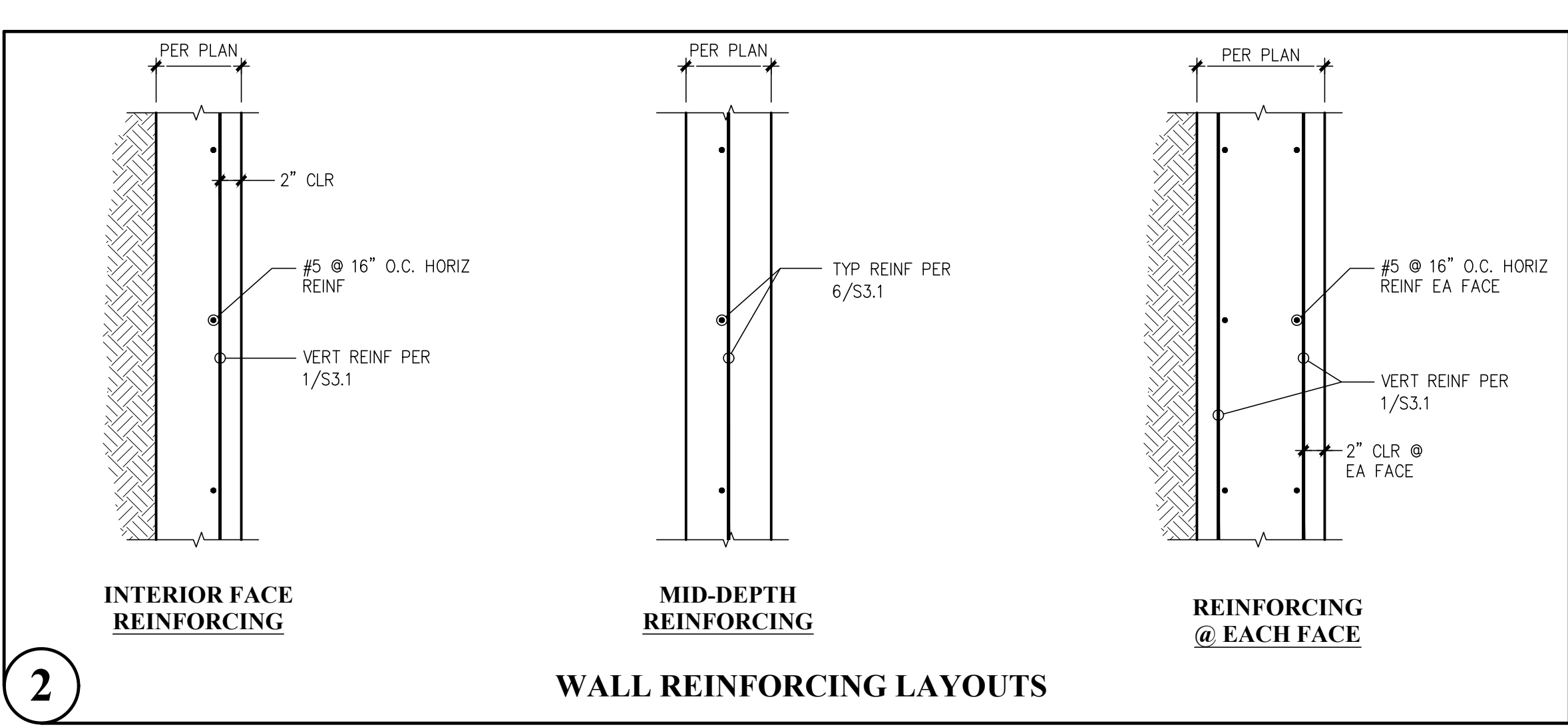
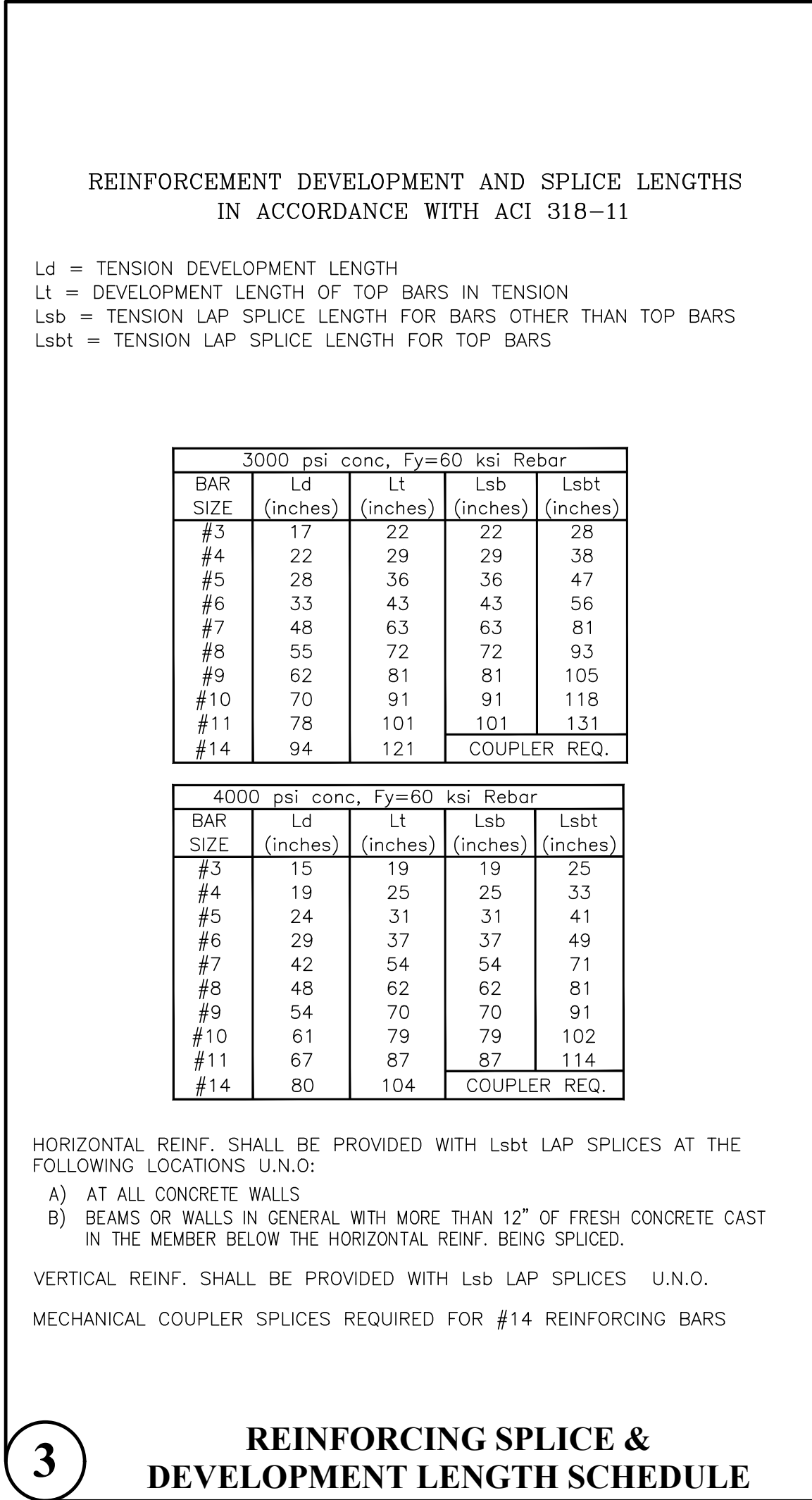
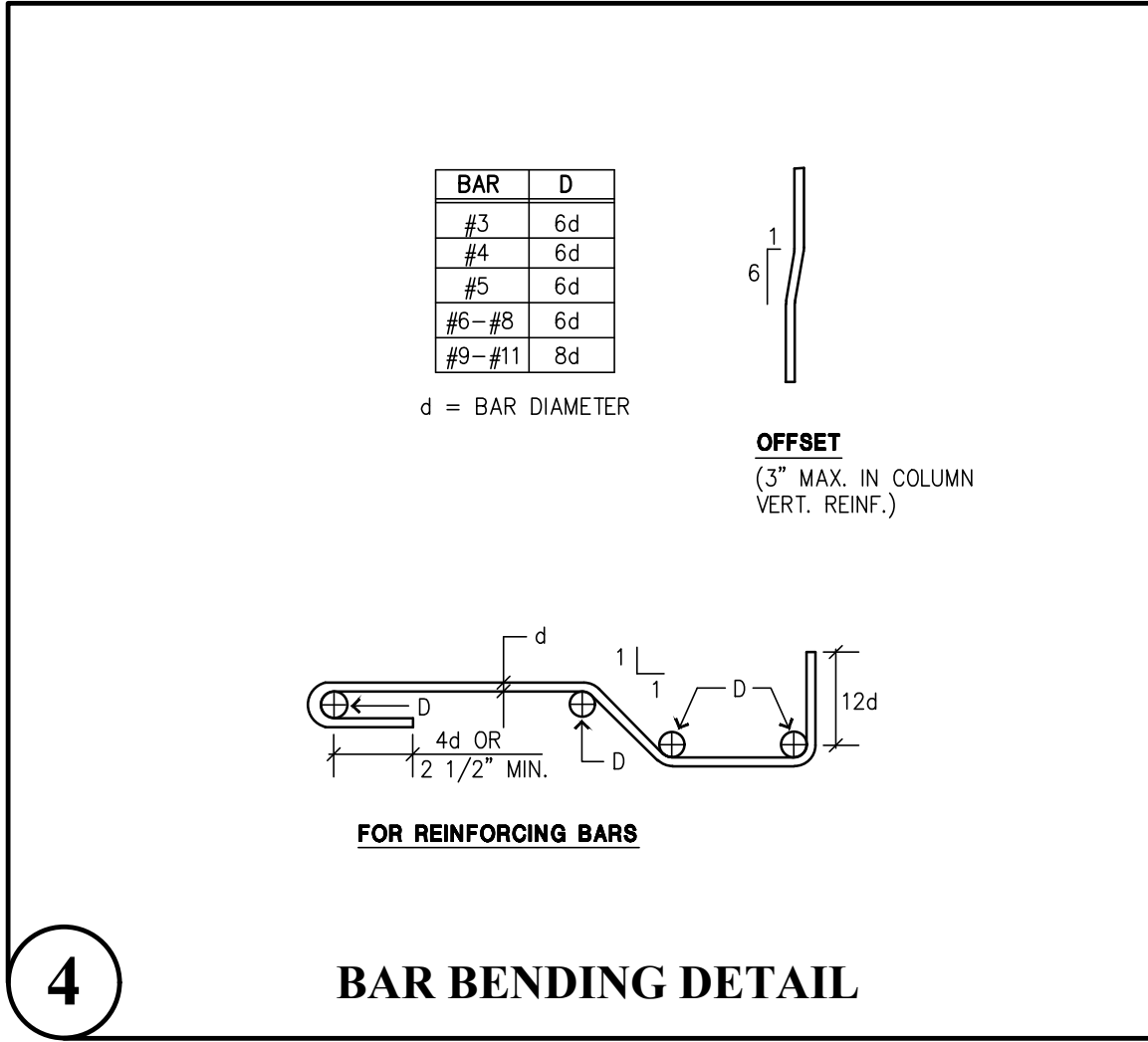
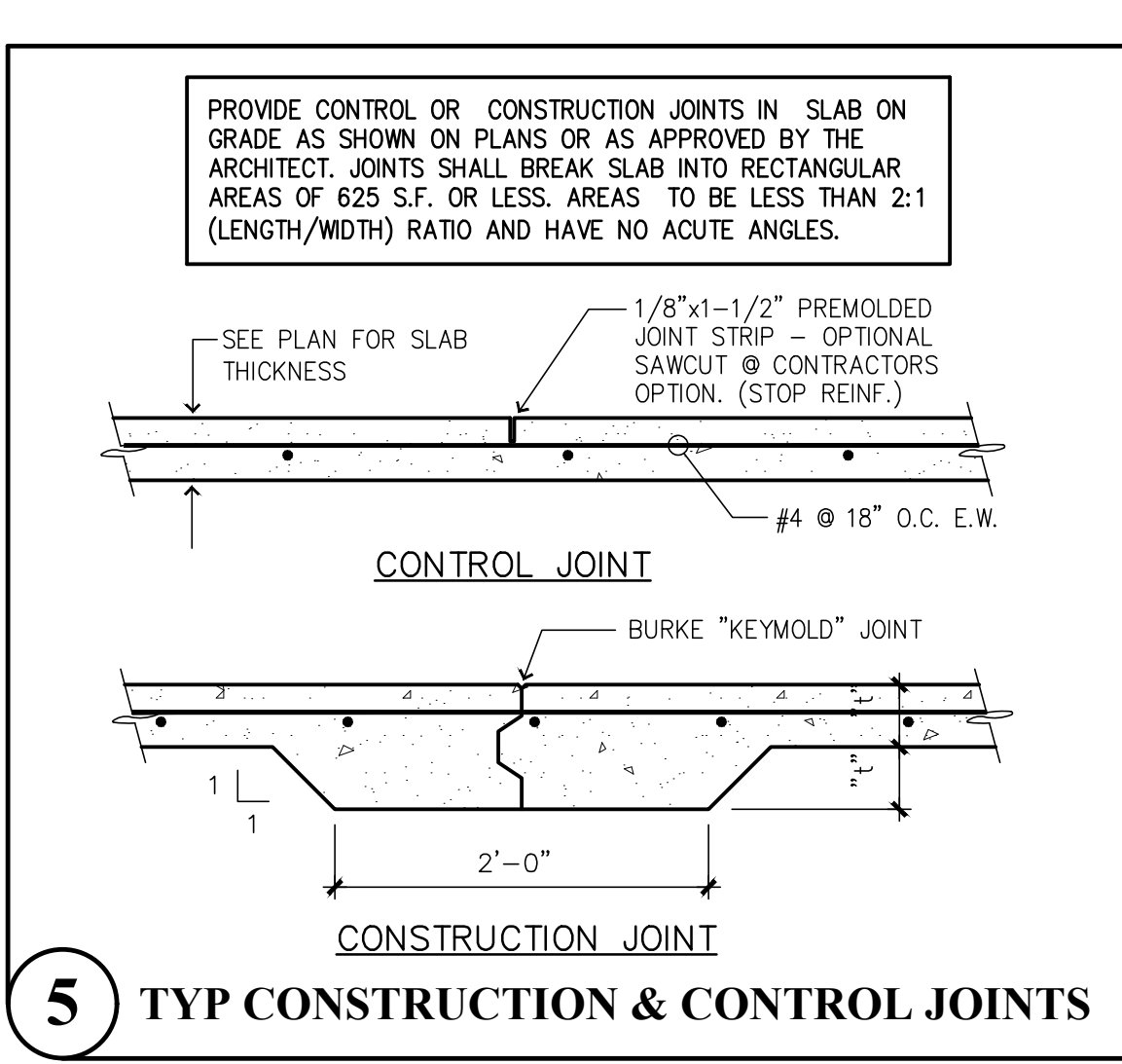
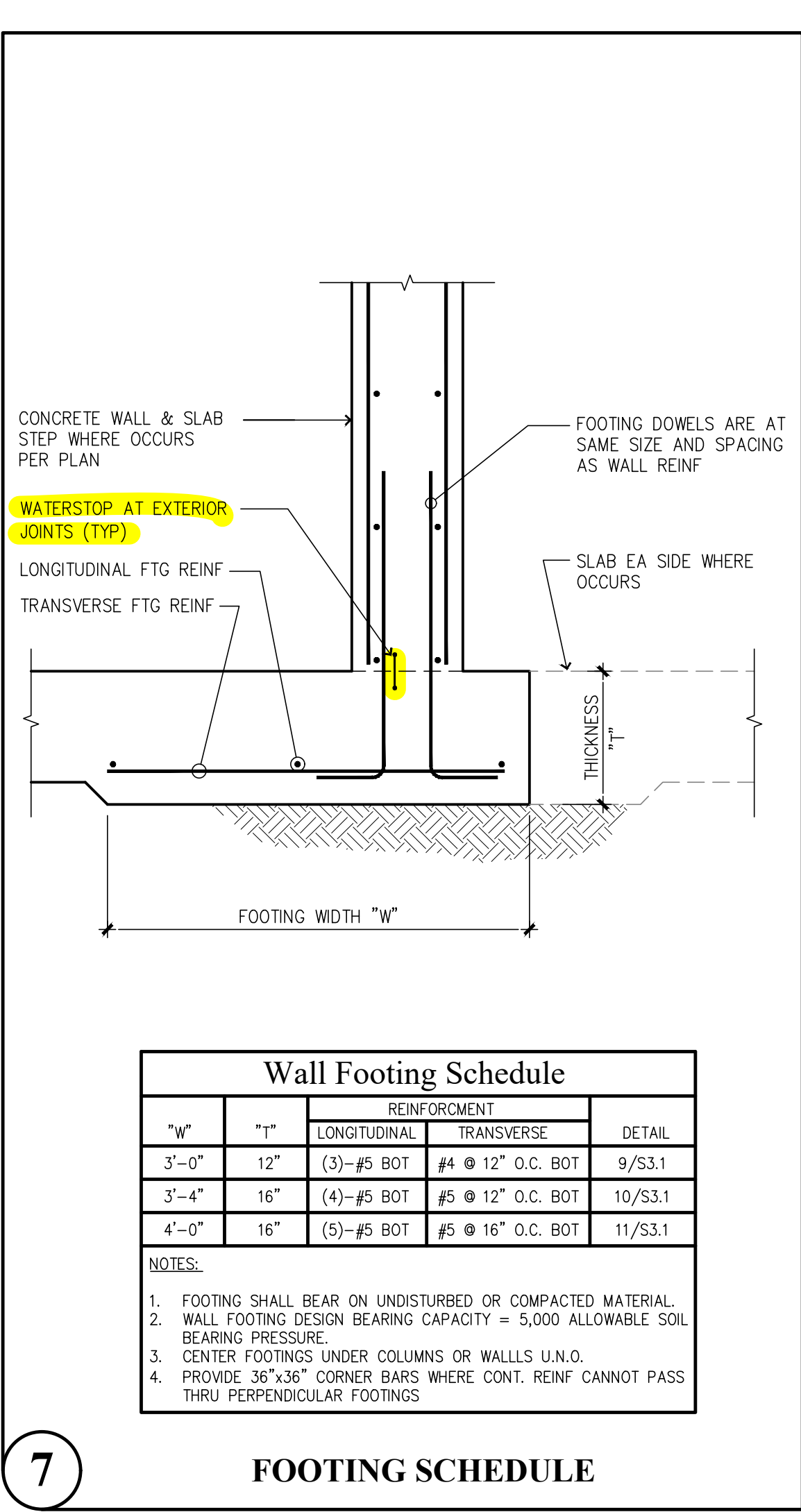
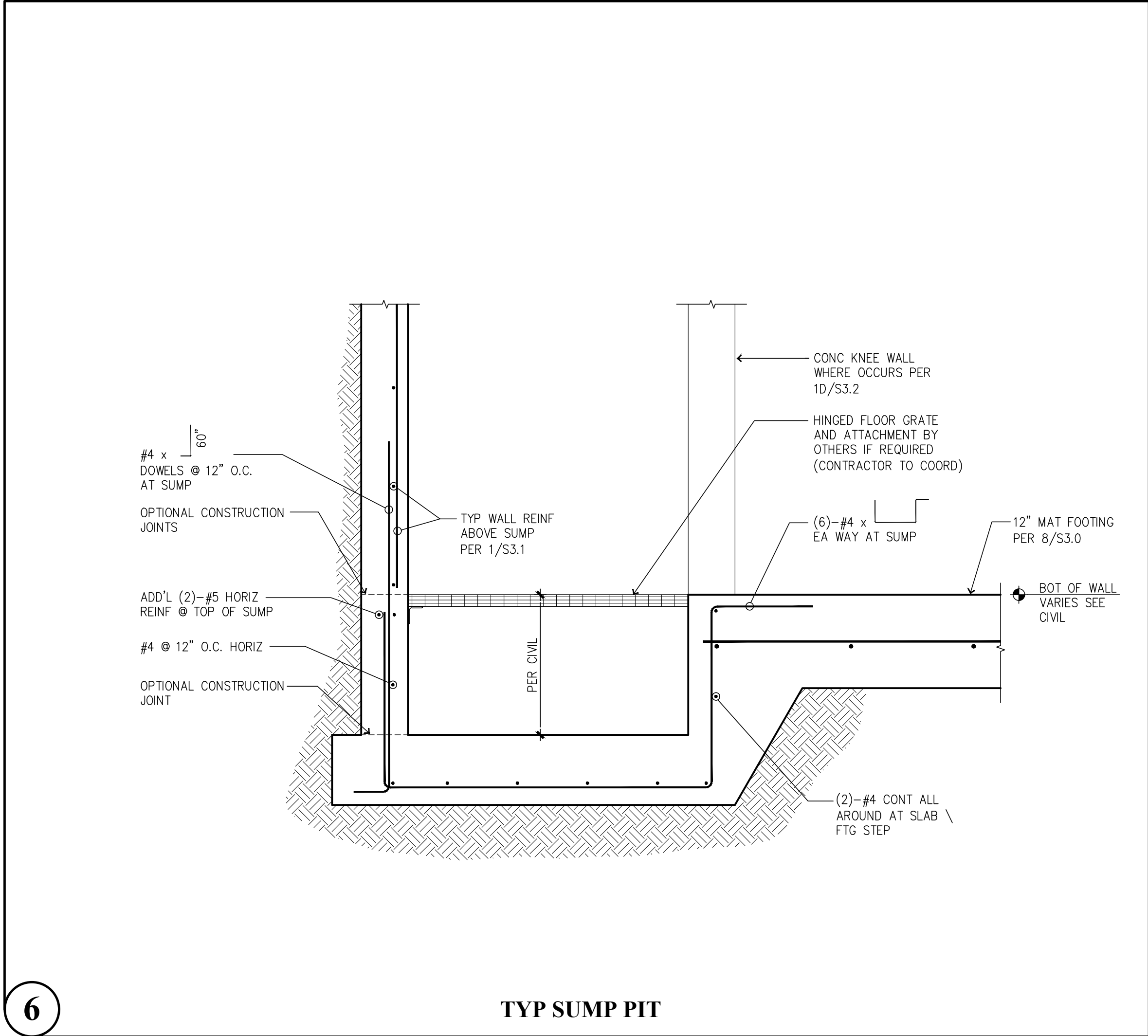
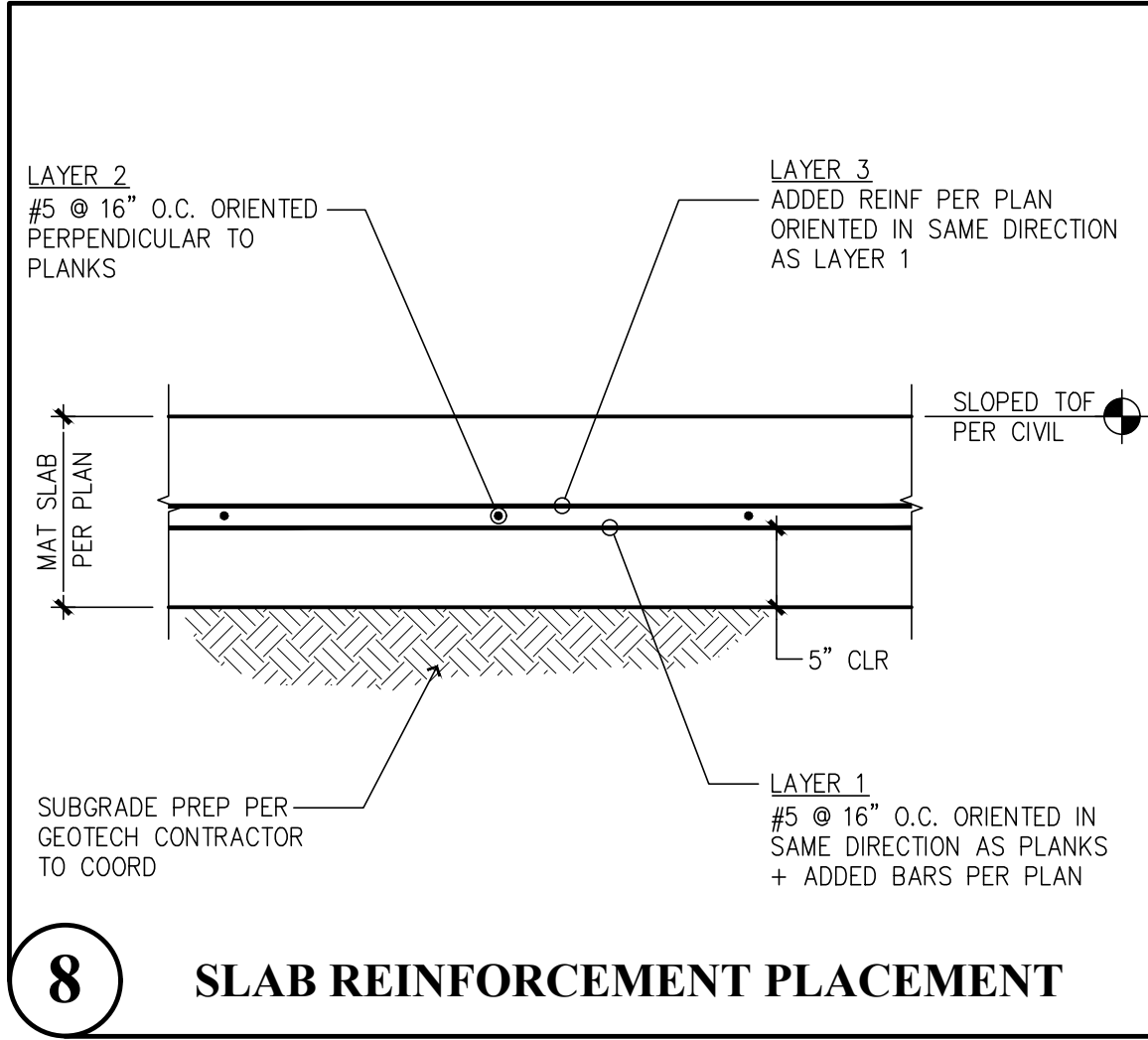
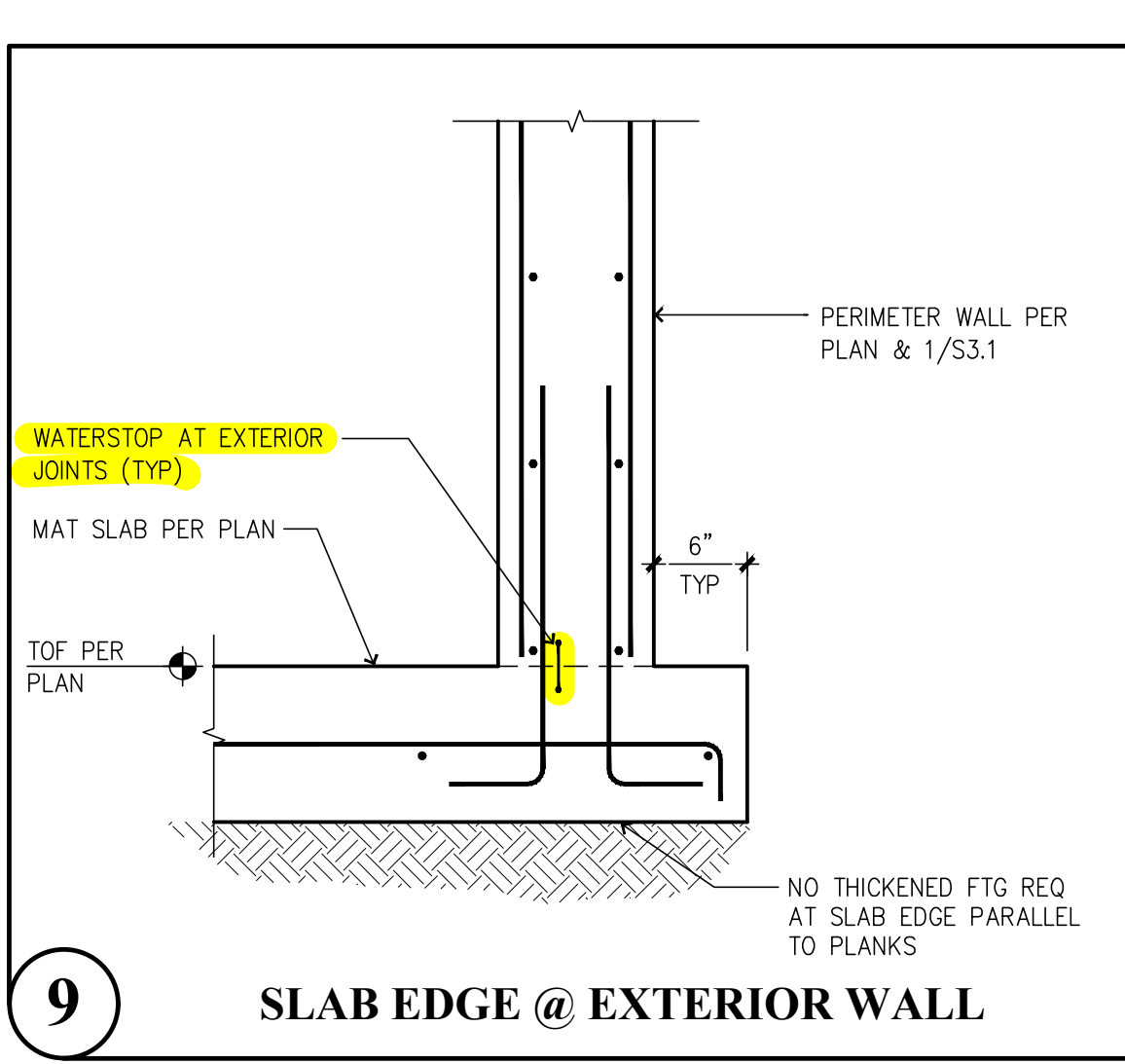
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S2.2



CAD FILE: F:\Projects\2023 Projects\Drawings\Detention Vault\S3.0.dwg PLOT DATE/TIME: 3/19/2025 - 4:18pm THANK YOU FOR USING SOLUTIONS + STRUCTURES



PROJECT NO. : 23-007  
DESIGNED BY : MRO  
DRAWN BY : RSO  
ISSUE DATE : 8-16-24  
LATEST REV. OF DWG. SET : 3-20-25

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Revisions to this sheet:

THOMAS L. CHASE, PE  
MARTIN R. OMARI, PE, SE  
OLEG G. KONDRATYUK, PE

3-20-2025

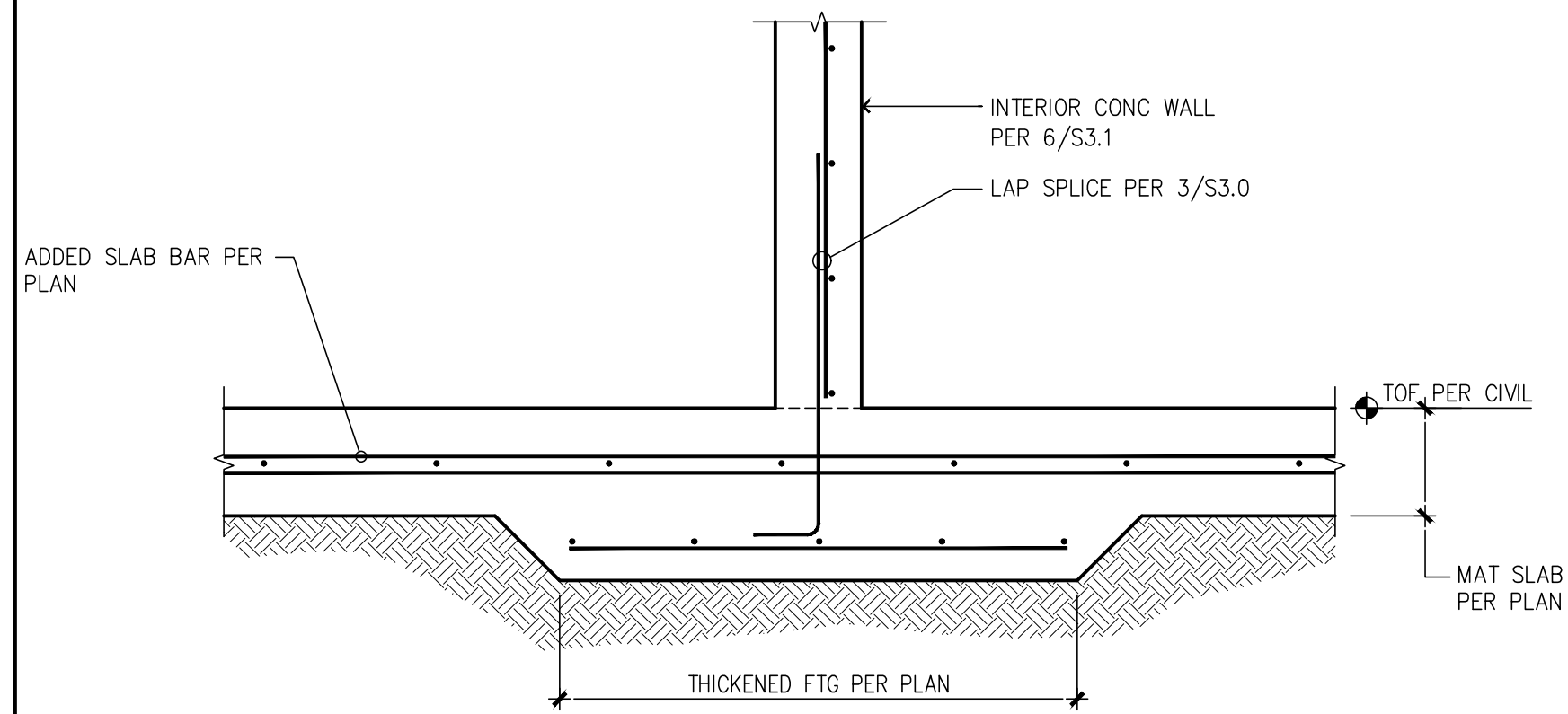


PLOT DATE/TIME: 3/19/2025 - 4:19pm THANK YOU FOR USING SOLUTIONS 4 STRUCTURES

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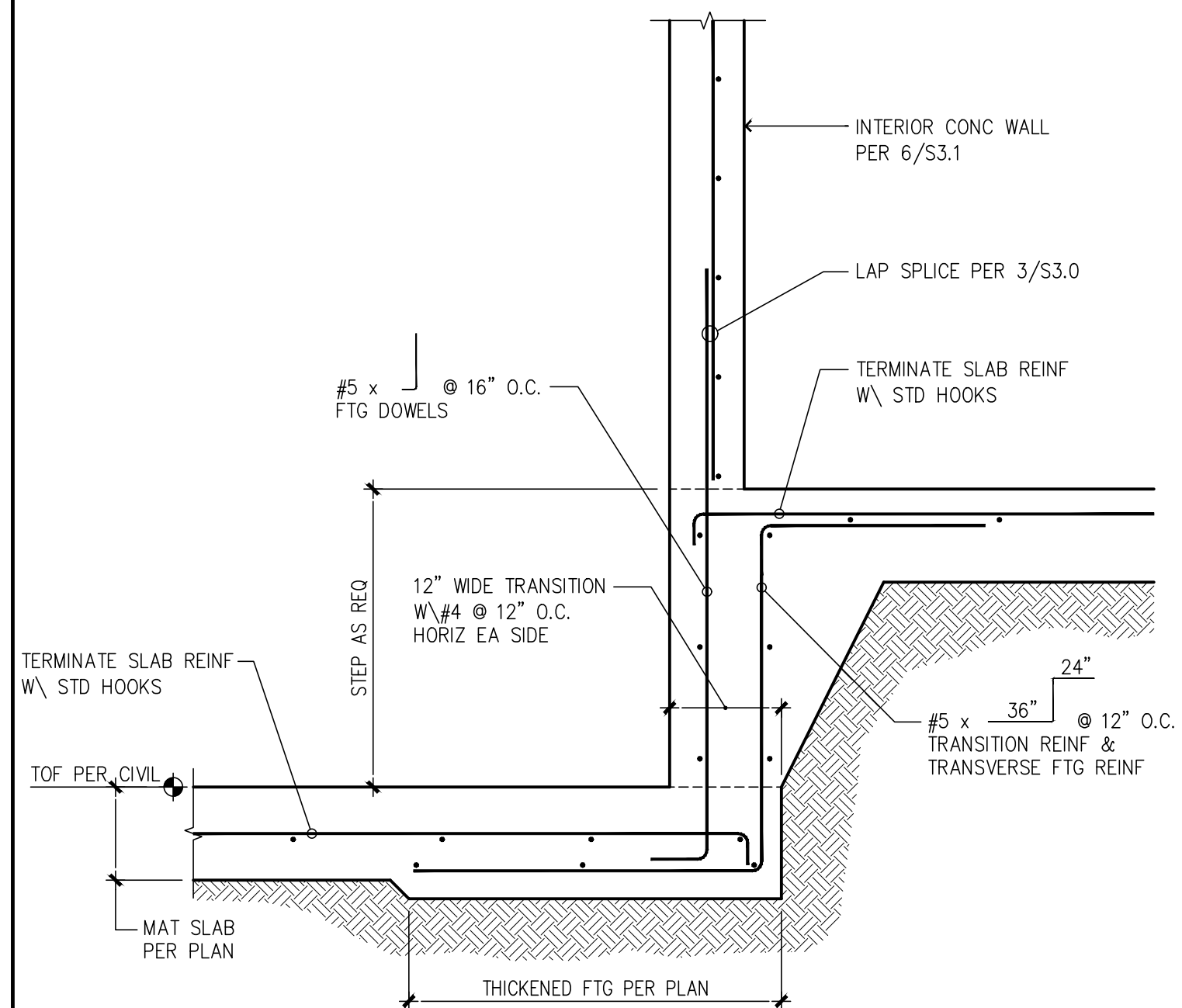
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### INTERIOR FOOTINGS



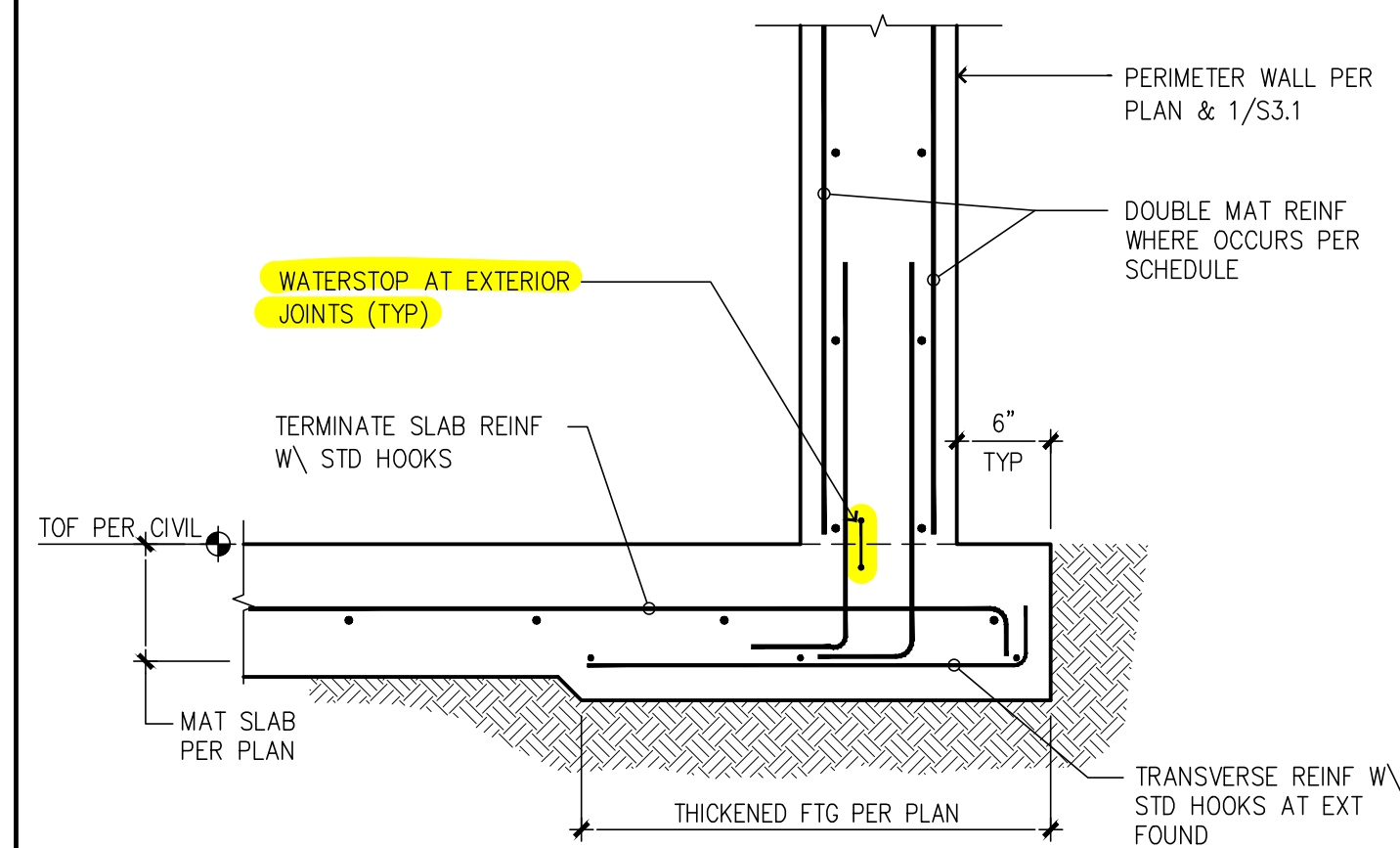
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### TYPICAL FOUNDATION STEP



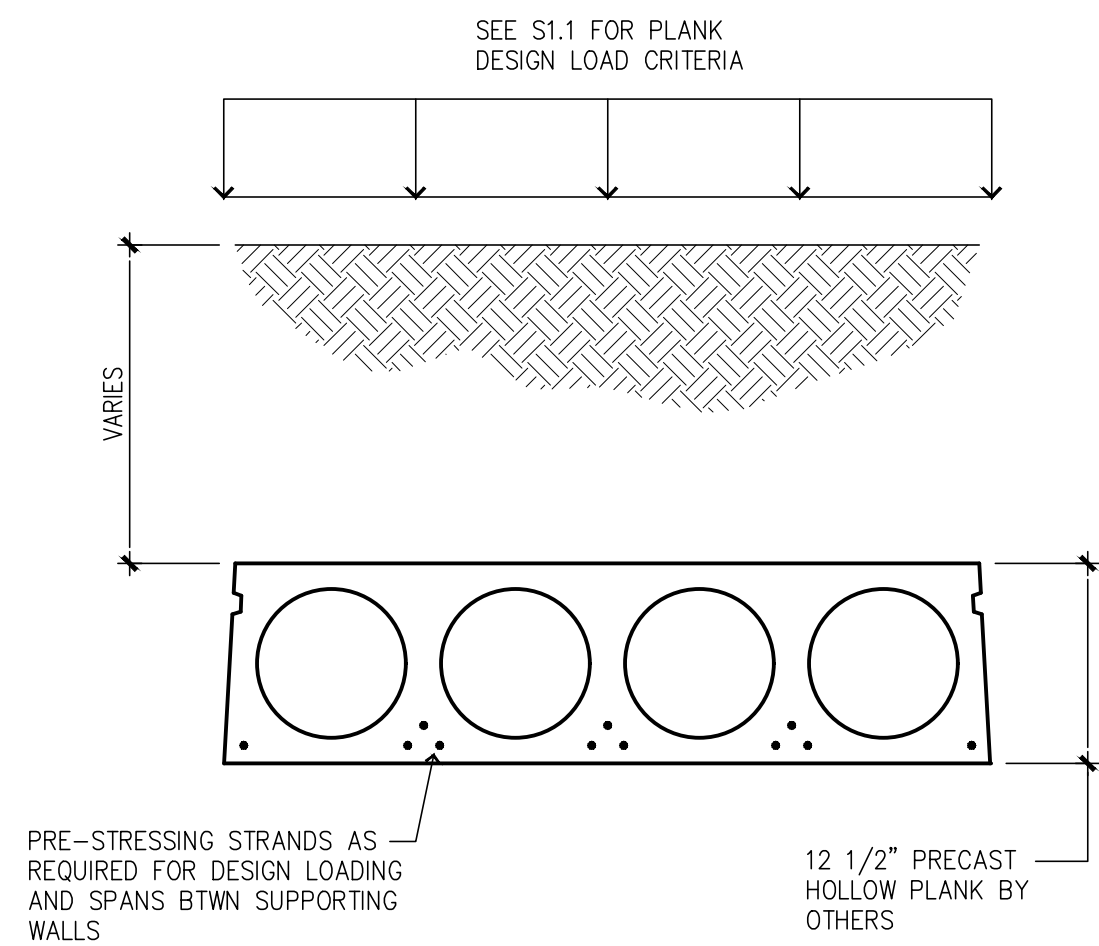
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### EXTERIOR FOOTINGS



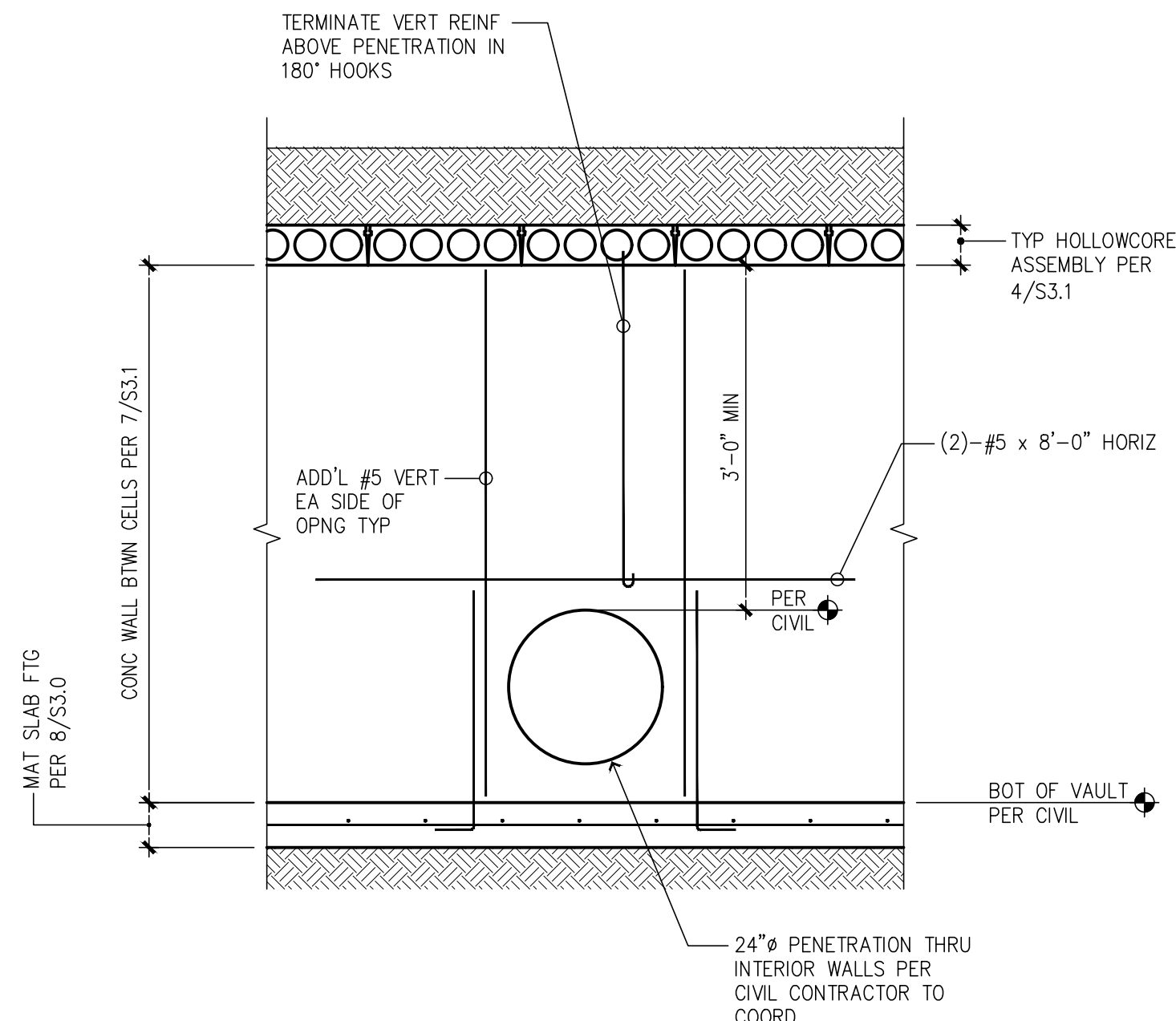
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### TYPICAL HOLLOWCORE PLANKS



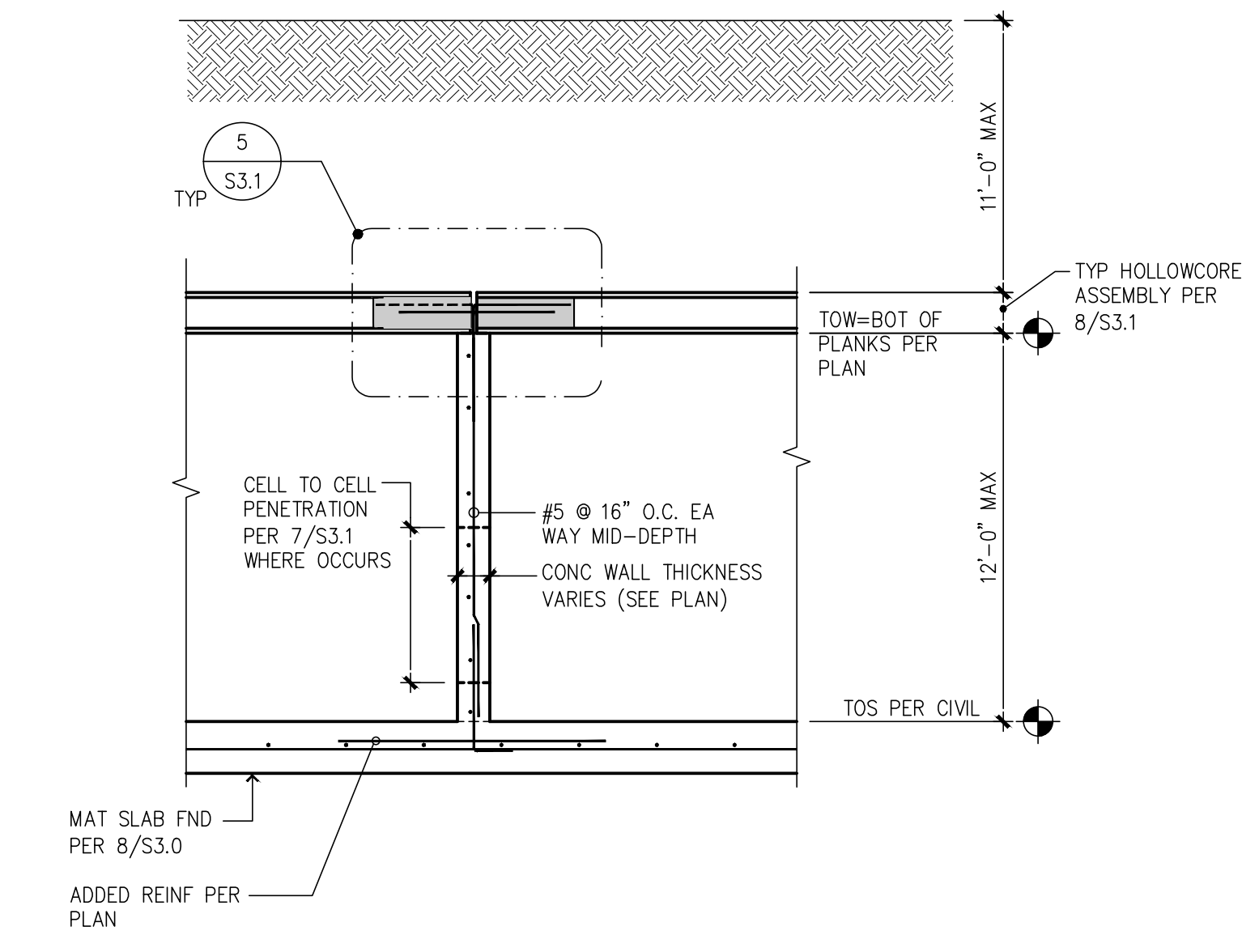
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### TYPICAL CELL TO CELL PENETRATION



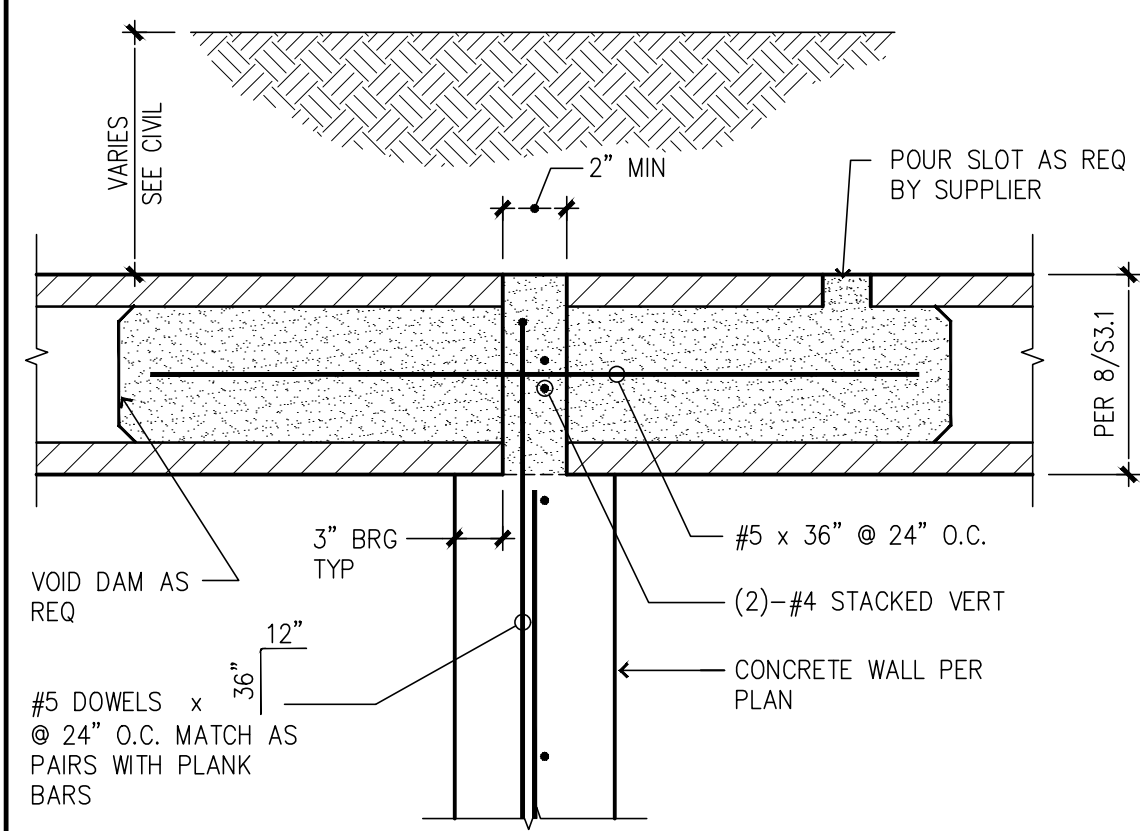
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### INTERIOR WALL SECTION



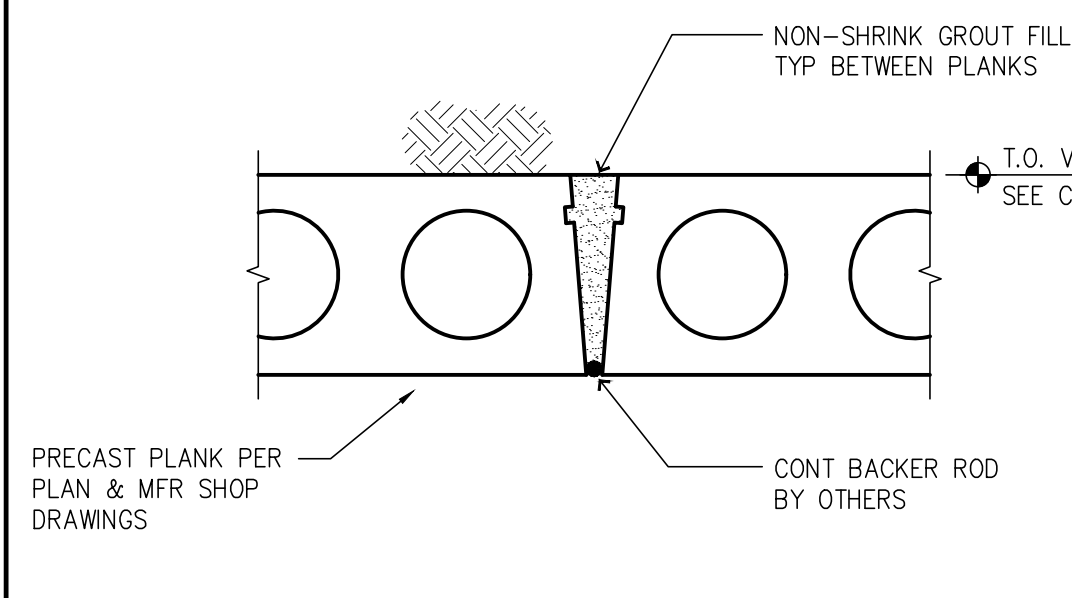
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### PLANK AT INTERIOR WALL OR BEAM



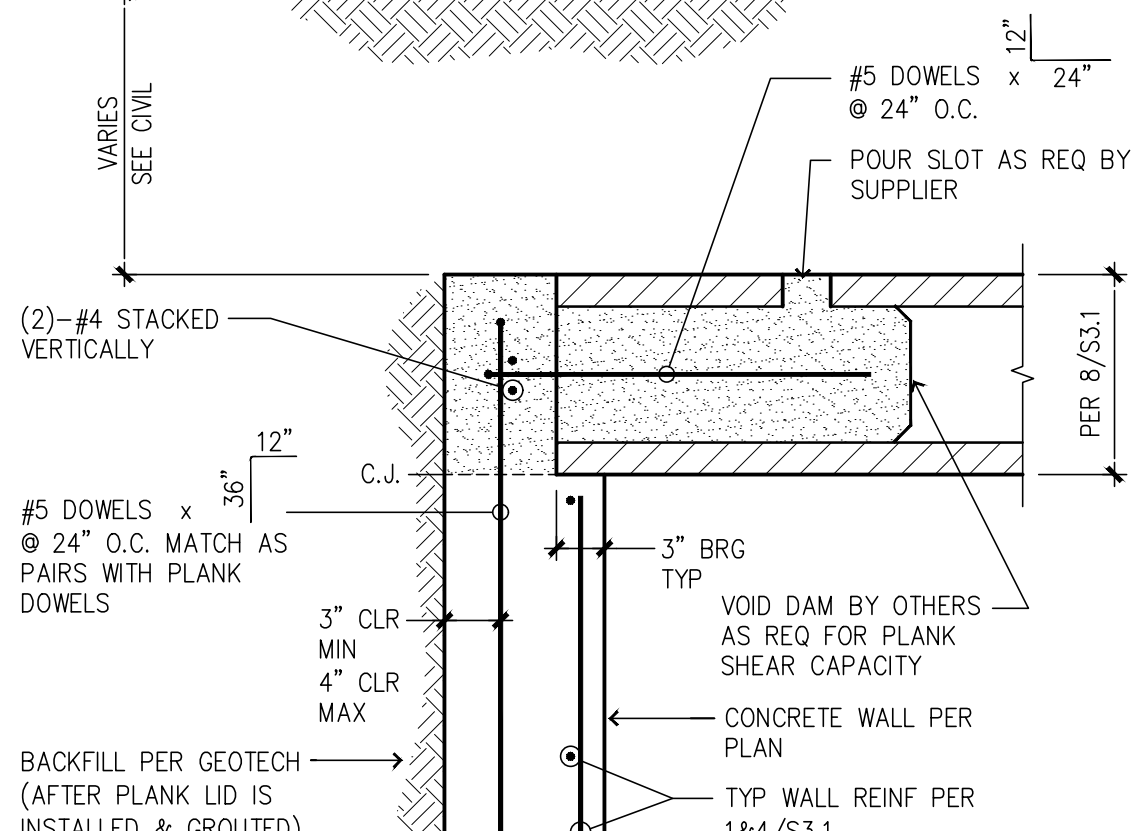
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### DETAIL BETWEEN PLANKS



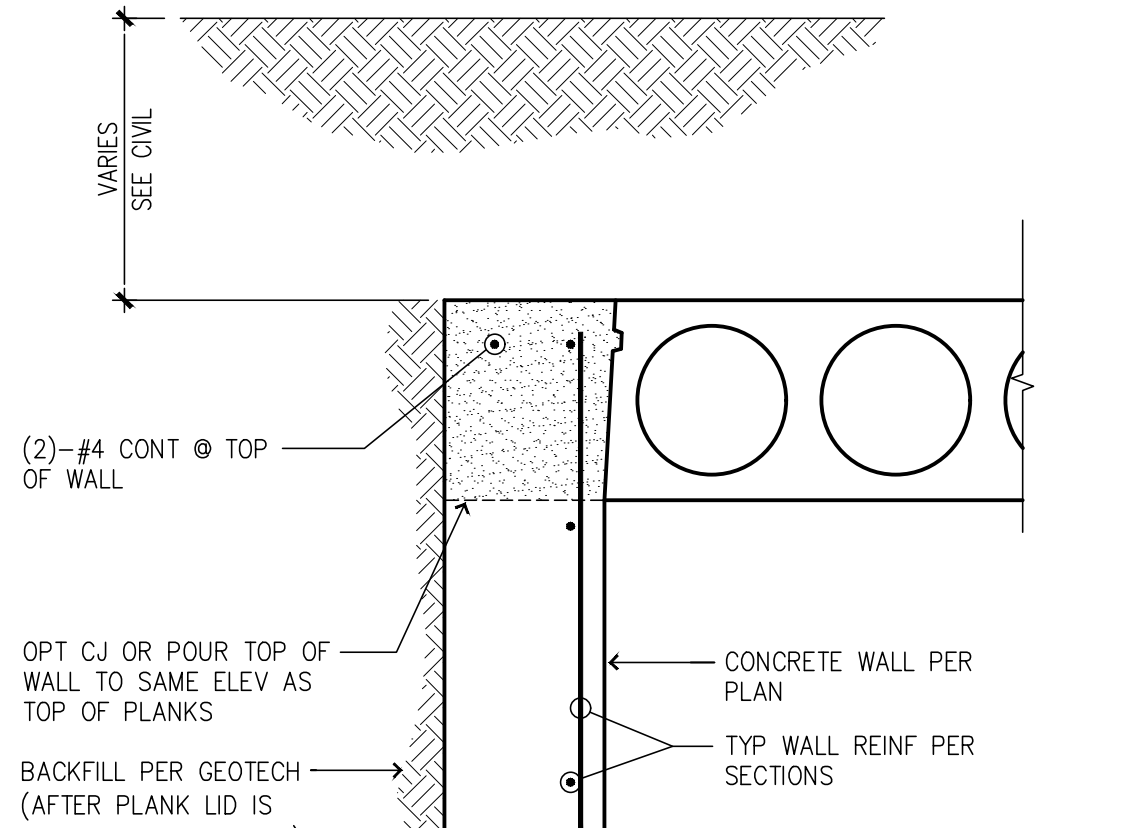
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### PLANK AT EXTERIOR WALL



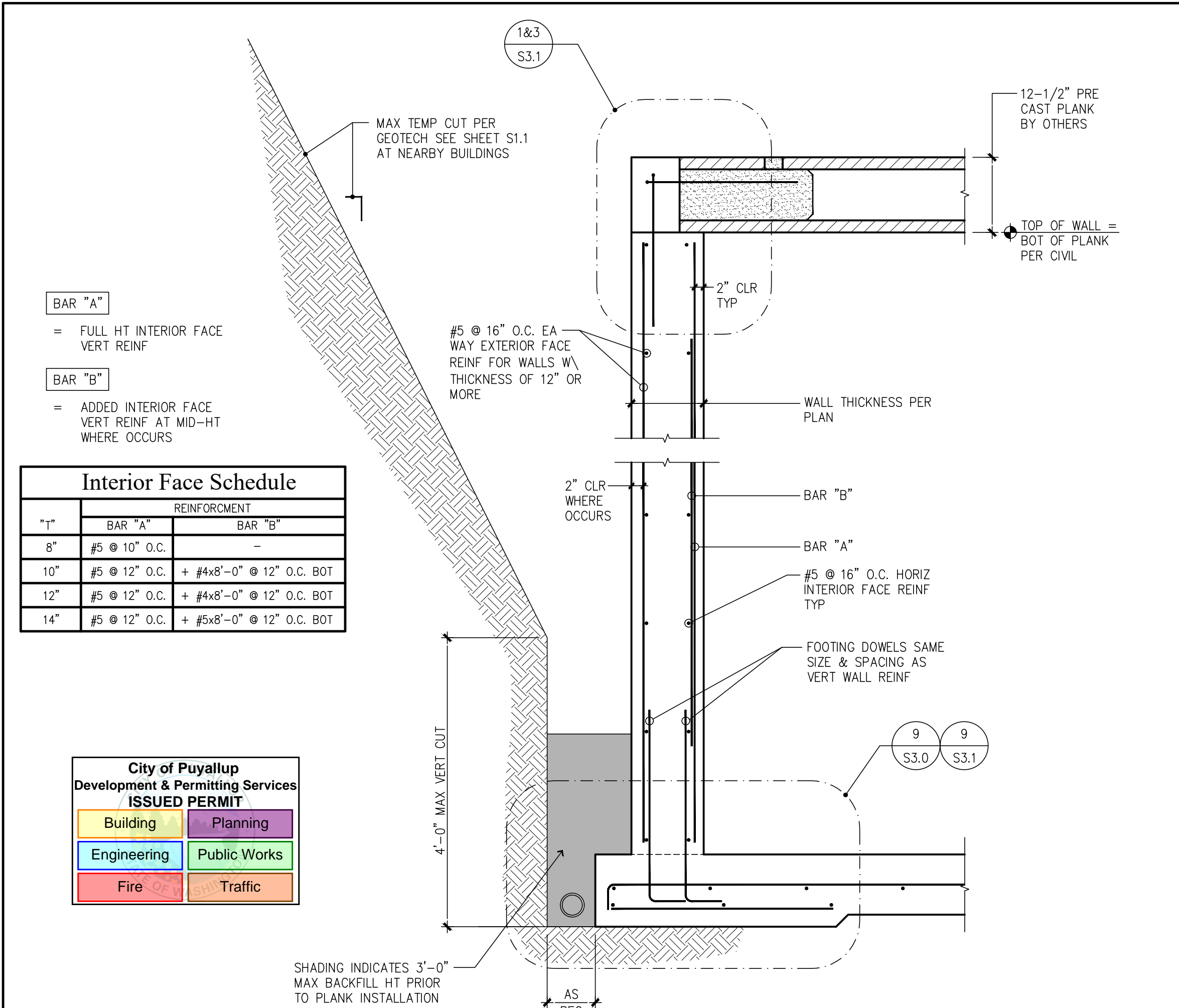
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### PLANK AT EXTERIOR WALL



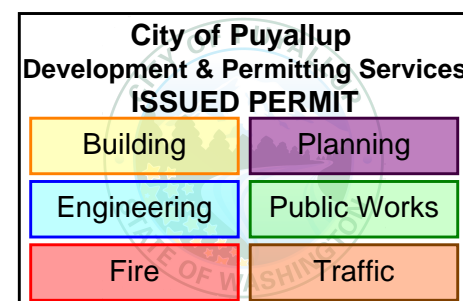
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### DETENTION VAULTS EXTERIOR WALLS



- BAR "A"  
= FULL HT INTERIOR FACE VERT REINF
- BAR "B"  
= ADDED INTERIOR FACE VERT REINF AT MID-HT WHERE OCCURS

| TYP | REINFORCEMENT |                           |
|-----|---------------|---------------------------|
|     | BAR "A"       | BAR "B"                   |
| 8"  | #5 @ 10" O.C. | -                         |
| 10" | #5 @ 12" O.C. | + #4x8'-0" @ 12" O.C. BOT |
| 12" | #5 @ 12" O.C. | + #4x8'-0" @ 12" O.C. BOT |
| 14" | #5 @ 12" O.C. | + #5x8'-0" @ 12" O.C. BOT |



Revisions to this sheet:

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Puyallup, Washington

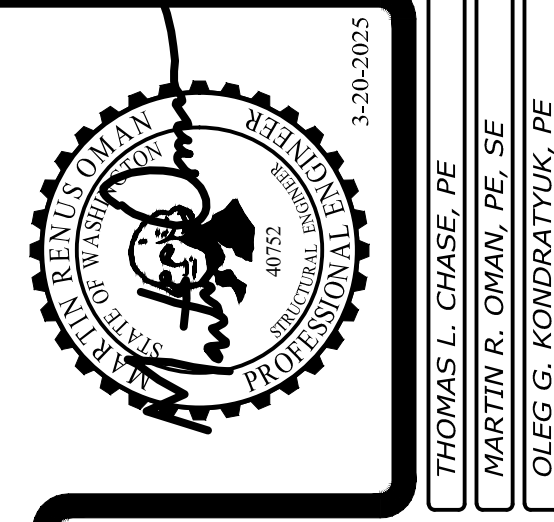
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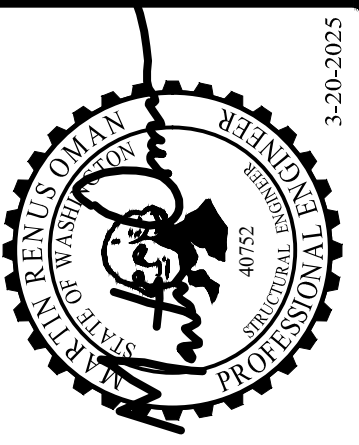
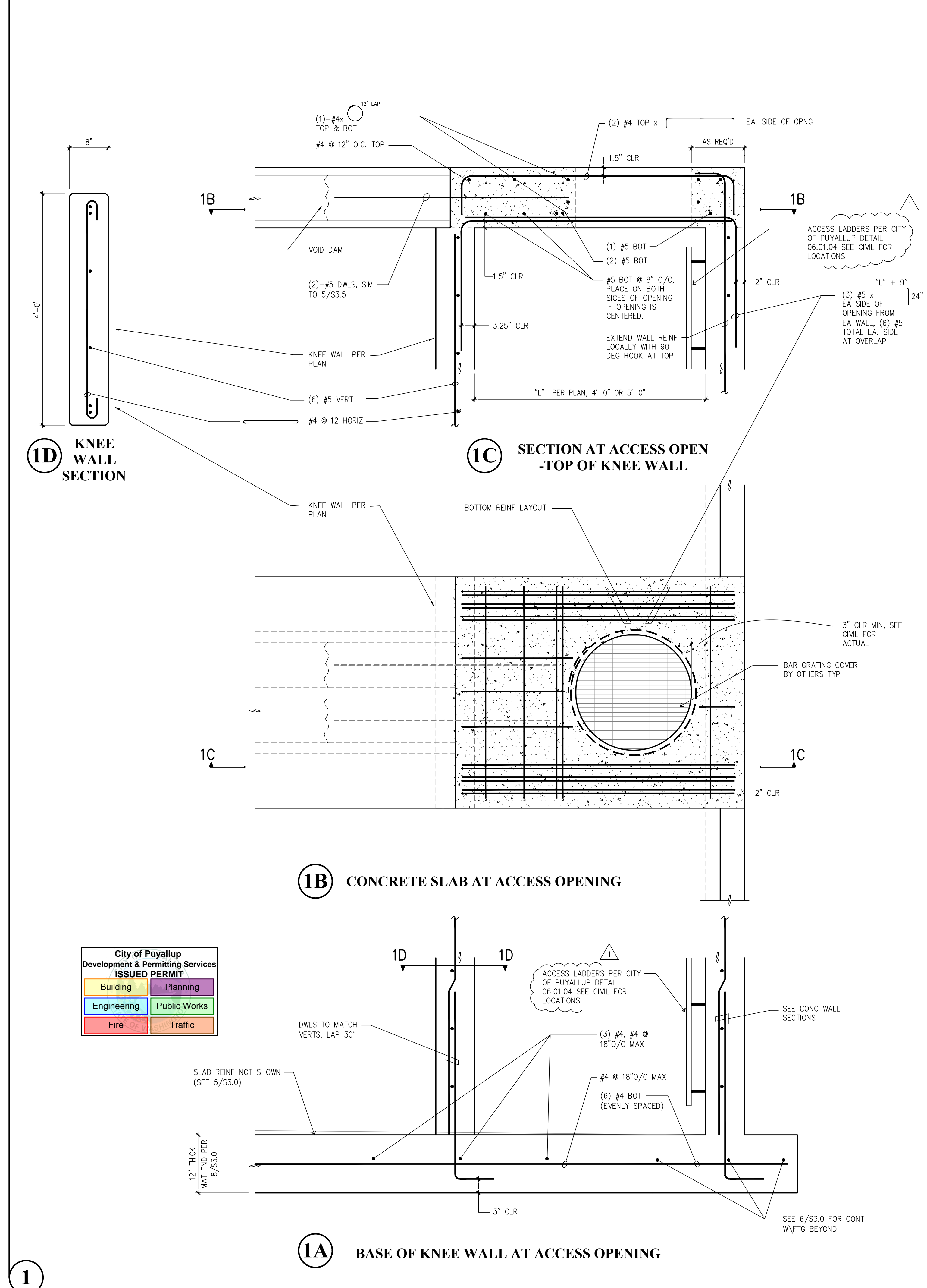
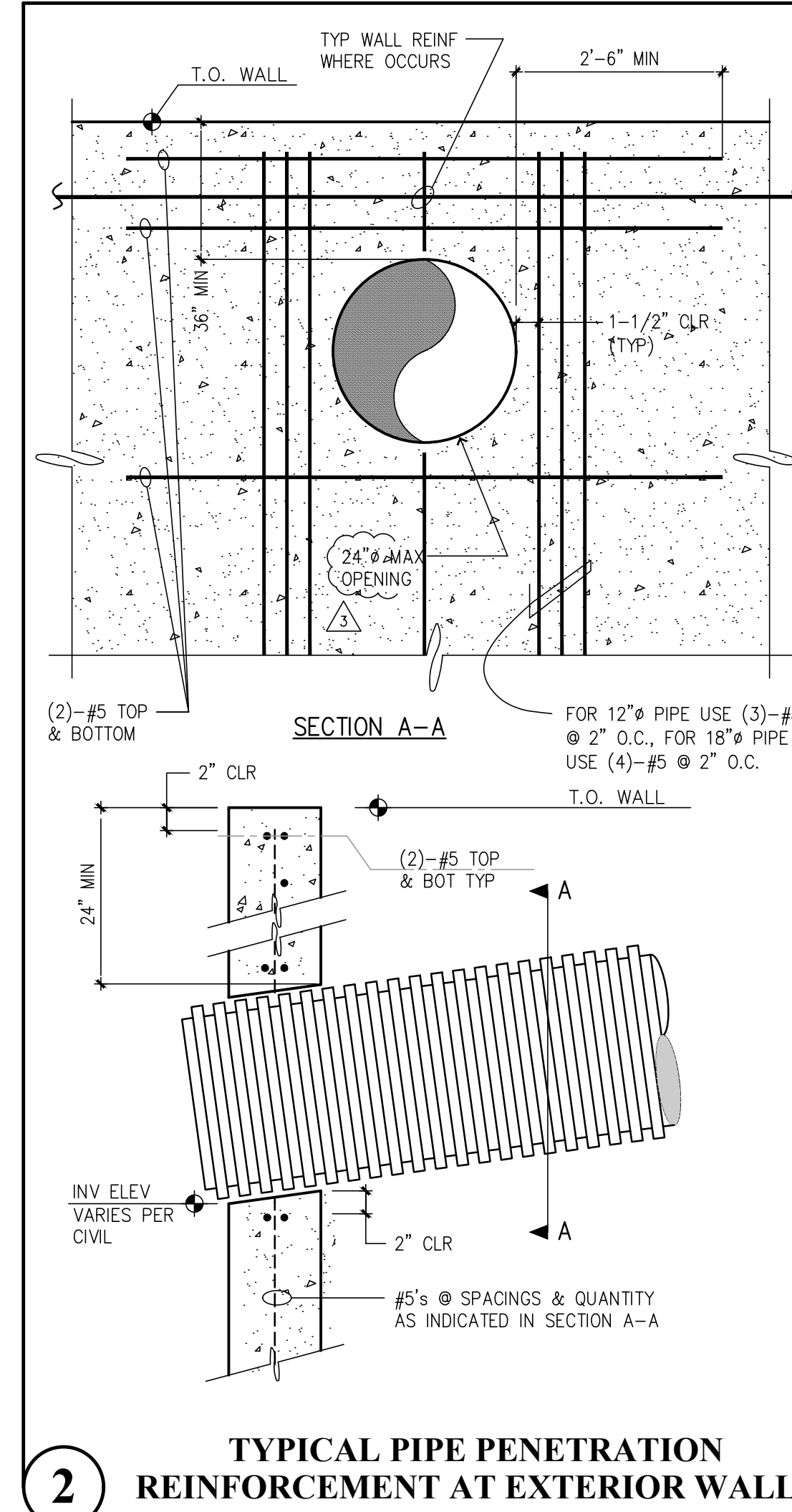
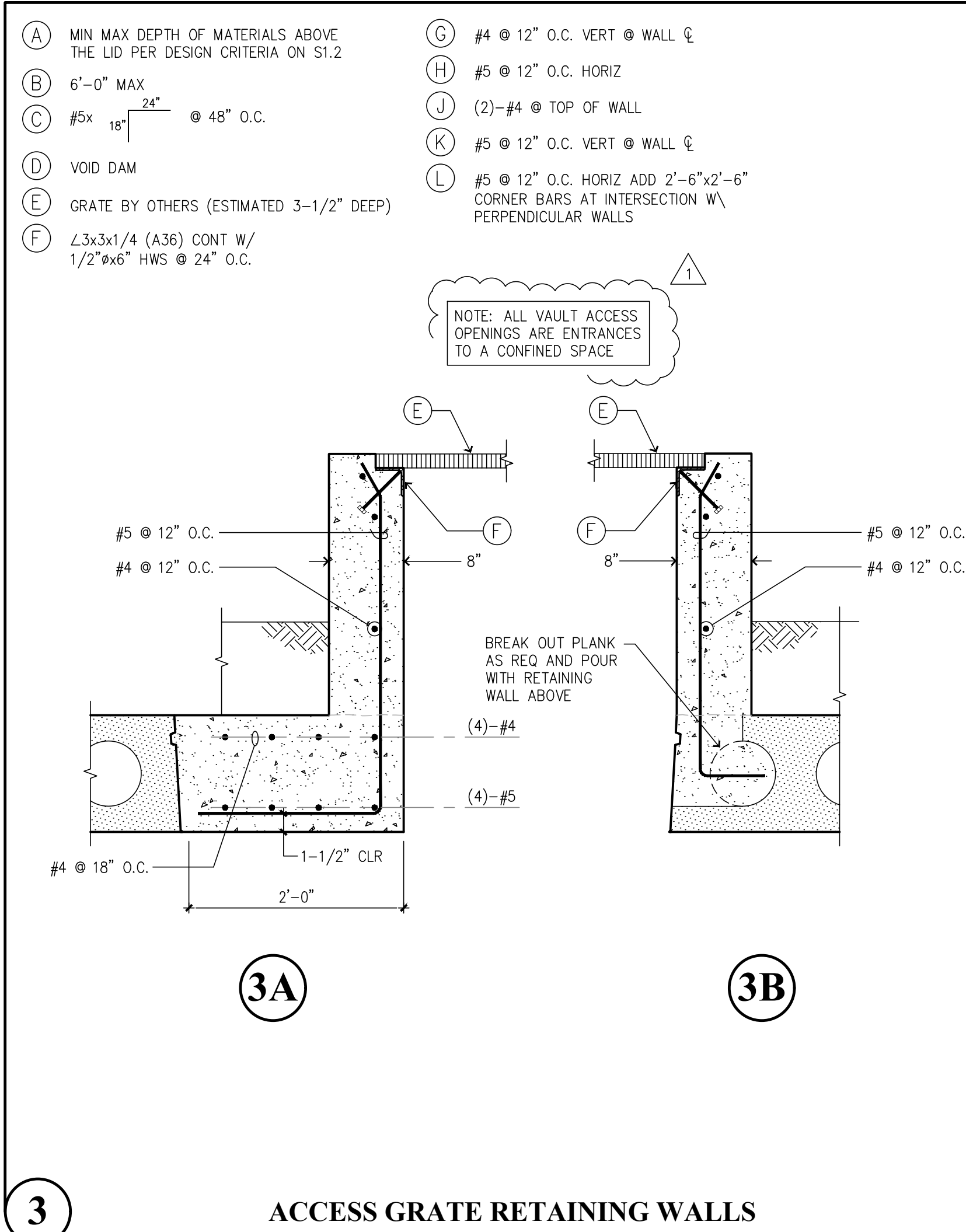
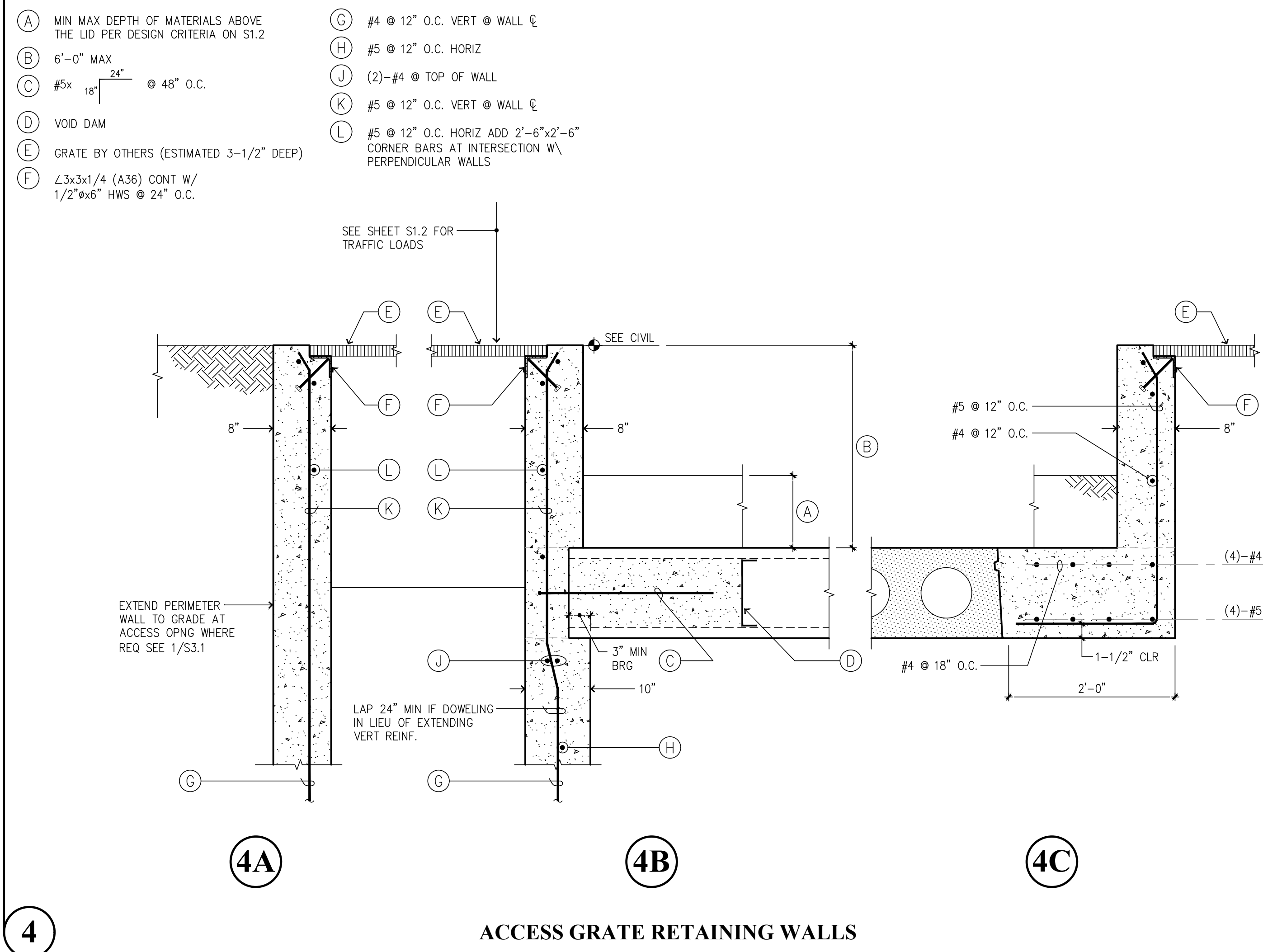
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**S3.1**





|                        |
|------------------------|
| THOMAS L. CHASE, PE    |
| MARTIN R. OMAN, PE, SE |
| OLEG G. KONDRATYUK, PE |

Revisions to this sheet: 

|   |           |                      |
|---|-----------|----------------------|
| 1 | 3-20-2025 | PLAN REVIEW COMMENTS |
|---|-----------|----------------------|

**Bradley Heights Apartments**  
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 Puyallup, Washington

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