

December 8, 2023  
223440



Department of Sustainable Planning  
and Community Development  
City of Victoria  
1 Centennial Square  
Victoria BC V8W 1P6

Attention: Ms. Kristal Stevenot  
Senior Heritage Planner

**Re: 1314 AND 1316-1318 WHARF STREET HERITAGE BUILDING  
TAX INCENTIVE PROGRAM THIRD-PARTY STRUCTURAL ASSESSMENT**

Dear Ms. Kristal Stevenot,

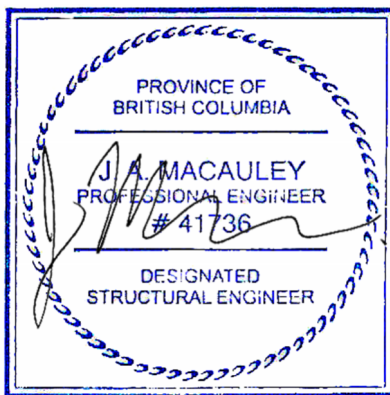
Glotman Simpson Consulting Engineers are pleased to provide the following Tax Incentive Program third-party structural assessment for the existing 1314 and 1316-1318 Wharf Street heritage structure retention. The building is located at the corner of Wharf Street and Johnson Street in downtown Victoria.

This report focuses on the assessment of the proposed seismic design strategy of the heritage structure and commentary on the construction costs associated with seismic restraint of the retained heritage components.

We trust this report meets your needs at the moment. If you require any additional information or clarification on items presented in this report, our team would be pleased to provide additional detail.

Yours truly,

**GLOTMAN•SIMPSON CONSULTING ENGINEERS**



Per: James Macauley P.Eng, Struct.Eng  
Associate Engineer



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## 1. TAX INCENTIVE PROGRAM

As allowed for in the British Columbia Community Charter Act, local governments have been enabled to provide tax incentives to development applicants for building projects that provide heritage conservation, rehabilitation or adaptive use. To this end, the City of Victoria has established the Tax Incentive Program (TIP) which provides financial credit for construction costs directly related to seismic upgrades to designated heritage structures as part of a singular upgrade or as part of a larger development application.

The City of Victoria Council of the Whole, in an effort to streamline TIP applications, has allowed third-party structural engineer consultants working on behalf of the City to be retained to review applications, specifically in regards to:

- Seismic design strategy of the heritage structures and new development
- Budgeted costs directly related to seismic retention construction
- Changes proposed during construction; and
- The project at completion to confirm compliance with work defined in the application

The heritage conservation review has been completed in line with the “Standards and Guidelines for the Conservation of Historic Places in Canada” Second Edition (2010).

## 2.0 BUILDING HISTORY

The heritage-designated structure to be considered as part of the TIP application is located at 1314-1318 Wharf Street near the corner of Wharf Street and Johnson Street. Also known as the Northern Junk buildings, the site consists of two separate warehouse structures constructed in 1860 both with at-grade ground levels with access to Wharf Street as well as partial below-grade basements. 1314 Wharf Street is known as the “Caire and Grancini Warehouse”; 1316-1318 Wharf Street is known as the “Fraser Warehouse”.



Figure 1 – Context Plan of Subject Site

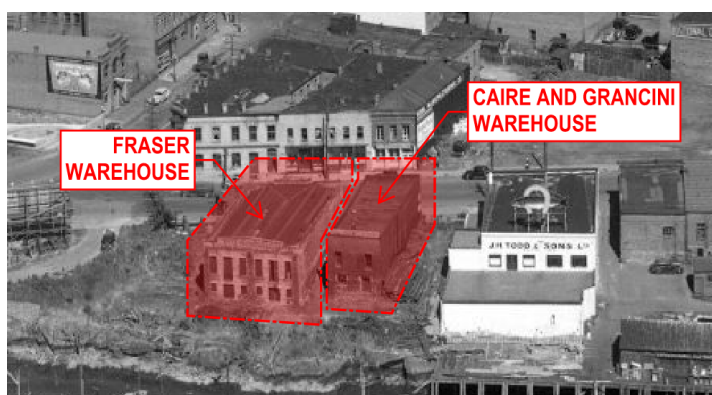


Figure 2 – Historic Photo of West Side of Structures (View from West)

### 3.0 BUILDING LAYOUT AND EXISTING CONDITIONS

#### 3.1 1316-1318 WHARF STREET - FRASER WAREHOUSE

The existing heritage structure located at 1316-1318 Wharf Street was originally built for commercial and warehouse occupancy and consists of two storeys, one at-grade and one partly below-grade basement. The site slopes from the east along Wharf Street down towards the west to the Gorge waterway. The east side face of the structure provides street-level access to Wharf Street and consists of a mix of stonework and brickwork, with historic stone pilasters at some point during the age of the structure being replaced by steel header beams. The west face of the structure provides access to the Gorge waterway with access directly into the basement of the structure. Refer to Figures 3 and 4 respectively.



Figure 3 – East Façade along Wharf Street



Figure 4 – West Façade along Gorge Waterway



The north and south elevations consist of stone walls with stacked stone faces complete with mortar and infilled with rock rubble. The rock appears to be a mix of granite (or similar) and sandstone; the sandstone is showing significant weathering with some portions essentially non-existent. The west façade face is similar construction to the north and south sides, with punched window openings framed with a mix of mass stone headers and steel beams.



**Figure 5 – Rock South Wall of 1314 Wharf Street / Brick North Wall 1316-1318 Wharf Street**



**Figure 6 – Extremely Deteriorated Condition of Sandstone in Exterior Walls**

The interior structure is delineated into two roughly equal portions with a continuous interior stone-and-mortar partition wall running east-west separating both the upper and lower levels. While it appears that the wall was originally solid, openings through the walls have been added and framed with brick jambs and headers such that the upper level is effectively continuous from one side to the other; the basement levels remain separated. The roof framing consists of wood truss joists spanning north-south from the exterior bearing walls to the interior partition walls. The floor framing appears to have originally consisted of 2x rough joists running north-south and seated within the brick walls, but had at some point been reframed such that the joisting now spans east-west and supported by dropped heavy timber beams and posts. Both the roof and floor framing are sheathed with ship-lap decking.



**Figure 7 – Interior Roof Support Condition at Interior Bearing Wall**



**Figure 8 – West Wall of Southern Portion of Structure**



Both the roof and floor framing are in extremely deteriorated condition. The existing roof membrane system has, at some point, failed and allowed significant amounts of moisture into the structure and rotted the roof truss joists and floor framing, the former of which has allowed failure and partial collapse of the northern portions of floor framing. The current owner has installed temporary supports to allow for site access, but is not a permanent solution.



**Figure 9 – South Above-Grade Stone Wall**



**Figure 10 – Interior Wall Bricked Opening**



**Figure 11 – Temporary Roof Framing Supports at North Wall**



**Figure 12 – Rotted Heavy Timber Support Beam**



**Figure 13 – Temporary Floor Framing Supports**





**Figure 14 – Weathered Slab-on-Grade at Basement**



**Figure 15 – Window Header Supports in West Wall**



A field review of the existing site conditions was conducted on September 27, 2023 with representatives from the developer and Glotman Simpson Consulting Engineers. The preceding condition photos were taken as part of this review. In general, the at-grade floor framing and roof framing are in significant weathered condition, with portions having rotted and partially or completely failed. The exterior and interior walls require significant repointing due to significant weathering of the jointing. Additionally, portions of the sandstone have undergone significant weathering and in a few locations have completely weathered through such that there are wide gaps to the exterior.

### 3.2 1314 WHARF STREET – CAIRE AND GRANCINI WAREHOUSE

The existing heritage structure located at 1314 Wharf Street was originally built for commercial and warehouse occupancy and consists of two storeys, one at-grade and one partly below-grade basement. The site slopes from the east along Wharf Street down towards the west to the Gorge waterway. The east side face of the structure provides street-level access to Wharf Street and consists of mass brick brickwork. The west face of the structure provides access to the Gorge waterway with access directly into the basement of the structure. Refer to Figures 16 and 17 respectively. The north and south elevations consist of stone walls with stacked stone faces complete with mortar and infilled with rock rubble for the below-grade portions, and mass brick walls from grade to the parapet level.



Figure 16 – East Façade along Wharf Street



**Figure 17 – West Façade along Gorge Waterway**



**Figure 18 – West Wall of Southern Portion of Structure**



**Figure 19 – East End of North Wall**

The roof framing consists of wood truss joists spanning north-south between the exterior bearing walls. The floor framing appears to have originally consisted of 2x rough joists running north-south and seated within the brick walls, but had at some point been reframed such that the joisting now spans east-west and supported by dropped heavy timber beams and posts. Both the roof and floor framing are sheathed with ship-lap decking.



**Figure 20 –North Stone Wall and Floor Framing Above at Basement**





**Figure 21 – South Stone Wall and Floor Framing Above at Basement**



**Figure 22 – Typical Floor Framing Soffit Layout**



**Figure 23 – Weathered Slab-on-Grade at Basement**

A field review of the existing site conditions was conducted on September 27, 2023 with representatives from the developer and Glotman Simpson Consulting Engineers. The preceding condition photos were taken as part of this review. In general, the at-grade floor framing and roof framing are in fair to weathered condition. The exterior require significant repointing due to significant weathering of the jointing.



## 4.0 HERITAGE RETENTION AND SEISMIC DESIGN STRATEGY

Given the vintage of the structure, it is almost certain that the original designers did not consider the lateral capacity of the structure. Mass brick wall structures such as this typically withstand minor seismic events due to the sheer weight of the wall. However, these types of structures are also very brittle and do not dissipate seismic energy well. As such, they cannot typically accommodate significant lateral movements; the current BC Building Code allows for lateral interstorey drifts up to 2.5%, whereas unreinforced masonry (URM) walls cannot typically exceed 0.5-1.0% before leading to stability issues and possible failure.

Seismic loading for Vancouver Island has increased significantly over the last decade as the seismicity of the region has become better understood. The National Research Council (NRC) continues to refine their seismic modelling as additional earthquake sources are identified and included, such as the decision to account for the Cascadia fault subduction event (not previously included prior to 2010). The current BC Building Code (BCBC 2018) relies on the National Building Code (NBCC 2015), which in turn increased seismic loading roughly 30-40% for this specific project location and geology between NBCC 2010 and NBCC 2015. From previous similar projects (and accounting for the local conditions), we estimate that the existing mass brick walls have a capacity of roughly 10-15% of current BCBC 2018 code demands; this will be further reduced by any subsequent code changes. To this end, seismic retrofit is required regardless of the scope of the new development.

### 4.1 ORIGINAL FRAMING AND POSSIBLE RETENTION

It is possible to retain much of the existing framing, with the notable exceptions of the roof of 1316-1318 Wharf Street as well as a good deal of the floor framing due to extensive water damage to both elements, all of which would require replacement with new framing. The exterior walls for both 1314 and 1316-1318 Wharf Street, while currently in poor condition, can be repointed and be braced against seismic loading using strong-back framing. The strong-backs themselves would require lateral bracing by the floor diaphragms, which do not currently have sufficient capacity and would require either a reinforced concrete topping or supplemental plywood sheathing nailed to the top of the floors and roofs. The diaphragms in turn would be braced back down to the foundation level by either concrete shearwalls or steel bracing as well as associated new concrete foundations to provide overturning resistance (along with soil anchors if the weight of the walls is insufficient).

The current basements for both structures are not currently tall enough for any substantive adaptive reuse; this should be reviewed in tandem with any heritage retention discussions.

### 4.2 PROPOSED DEVELOPMENT RETROFIT

The proposed retrofits for this project are in alignment with the retention strategy, with the exception of the replacement of the replacement of the wood floor and roof framing for 1316-1318 Wharf Street and the demolition of the same elements for 1314 Wharf Street to suit new structure above the heritage structures, with concrete slabs replacing the wood framing for both structures. Comments regarding development are beyond the scope of this report, but it should be said that the floor and roof diaphragms would have required upgrade regardless of any new framing built above.

The new development has proposed to retain the following heritage items:

- All exterior façade wall framing for both structures, including parapets and cornices

- Interior bearing wall for 1316-1318 Wharf Street

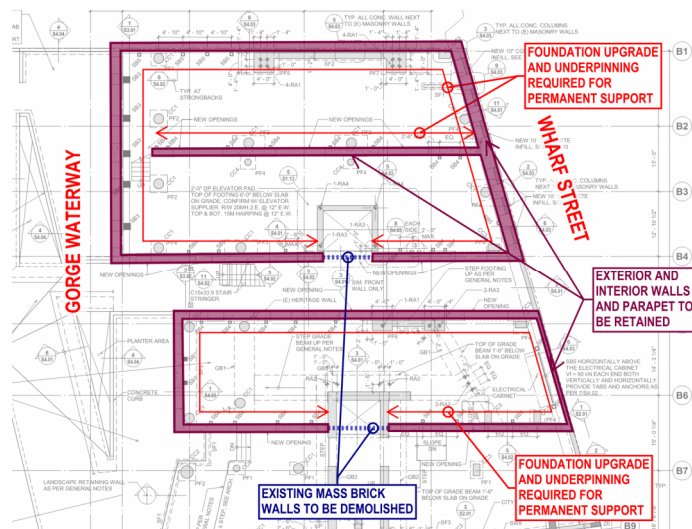
The following items have been demolished:

- Wood roof framing, including wood truss joists and ship-lap decking for both 1314 and 1316-1318 Wharf Street
- Wood floor framing, including 2x joists, dropped heavy timber beams and posts, and ship-lap decking for 1314 and 1316-1318 Wharf Street

The following items have been proposed for reuse:

- Heavy timber beams and posts from 1316-1318 Wharf Street to be reused as strong-back lateral wall supports for the west exterior walls, contingent on material condition
- Reuse of floor sheathing and other miscellaneous wood framing for secondary non-structural architectural elements, contingent on material condition

It should also be noted that the basements for both buildings will be excavated down to increase clearance height for adaptive reuse and accessibility, further enhancing the functional nature of the structure.



**Figure 24 – Basement Level Heritage Retention Plan (As Proposed by Developer)**



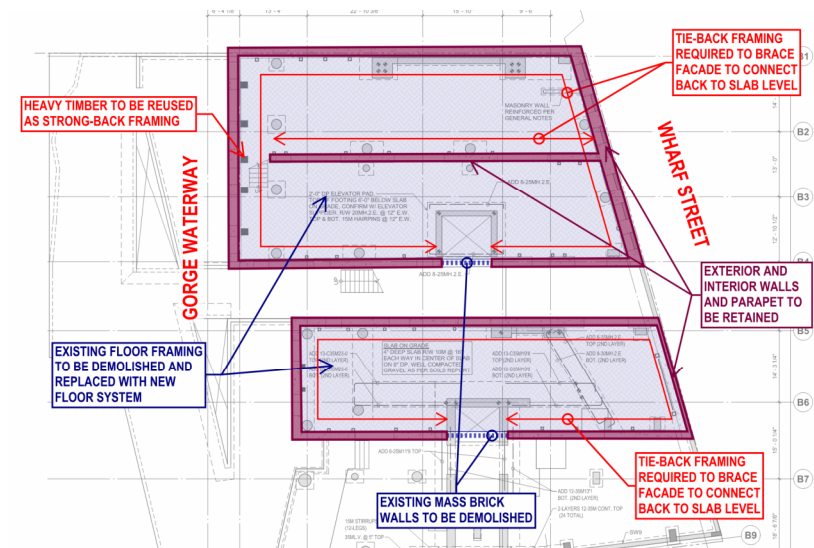


Figure 25 – At-Grade Level Heritage Retention Plan (As Proposed by Developer)

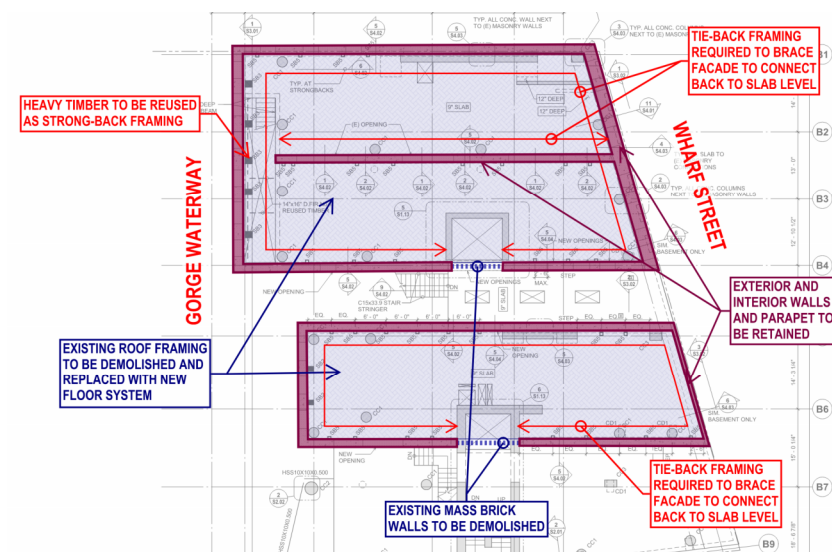


Figure 26 – Roof Level Heritage Retention Plan (As Proposed by Developer)

#### 4.2.1 Façade Framing

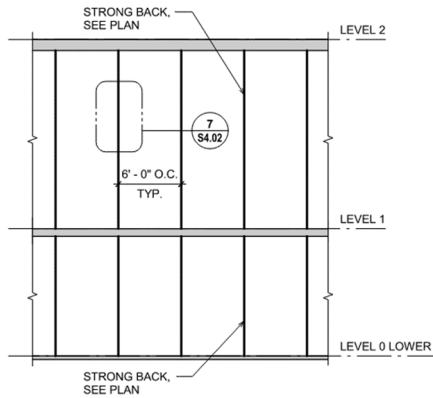
The brick and stone wall façades do not have sufficient out-of-plane capacity to resist horizontal lateral movement in a seismic event (i.e. pulling away from the main building) and will require back-up framing. The façades will need to be tied back to the foundation, at-grade and roof level framing with supplemental drilled and epoxy-grout embedded threaded dowels connected to concrete and steel strong-back beams and posts. Refer to Figures 24, 25 and 26 for plan drawing excerpts from the project structural drawings of layout of exterior and interior walls to be retained, as well as Figures 27-30 for typical strong-back layout and connections. These details are typical for the north and south walls for both 1314 and 1316-1318 Wharf Street.



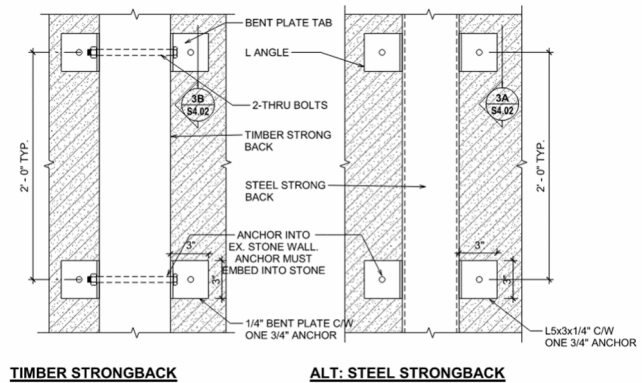


The existing floor and roof framing will be removed and replaced with structural suspended concrete slabs. These slabs will be used to support the strong-back framing, as well as directly supporting the interior stone wall at the floor level by casting the slabs against the wall; the adjacent concrete and steel columns support the vertical loading such that the stone wall does not support any loading beyond its own self-weight.

The existing parapets for both buildings are being laterally supported by the new concrete slabs.



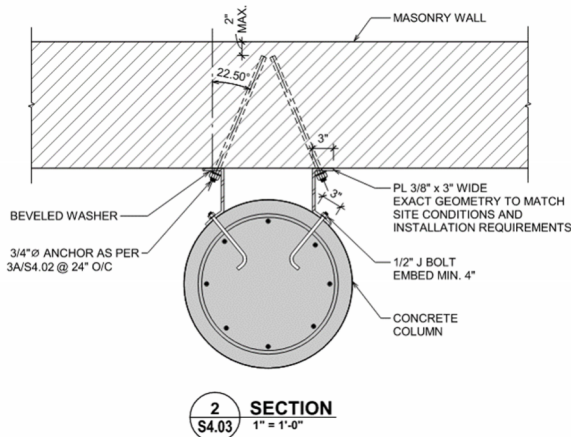
**6 TYP. ELEVATION**  
S4.02 1/8" = 1'-0"



**7 STRONG BACK DETAIL**  
S4.02 1 1/2" = 1'-0"

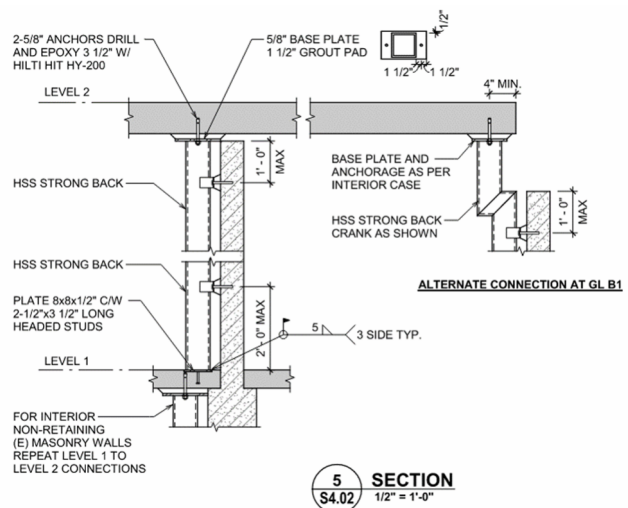
Figure 27 – Typical Wall Strong-Back Framing

Figure 28 – Typical Wall Strong-Back Connection



**2 SECTION**  
S4.03 1" = 1'-0"

Figure 29 – Concrete Column Strong-Back



**5 SECTION**  
S4.02 1/2" = 1'-0"

Figure 30 – 1316-1318 Wharf Interior Wall Bracing



Additional to the typical strong-back details discussed in the preceding paragraphs, the front and back elevations (i.e. east and west elevations) have specific back-up framing layouts; refer to Figures 31-34 for elevations. Structural steel members are to be utilized for the strong-back supports, with the exception of the west elevation of 1316-1318 Wharf Street where the intent is to reuse existing heavy timber members.

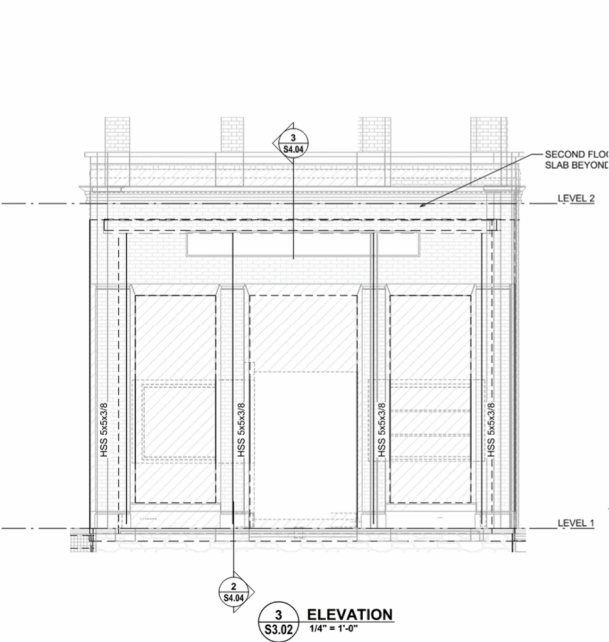


Figure 31 – 1314 Wharf Back Façade Support

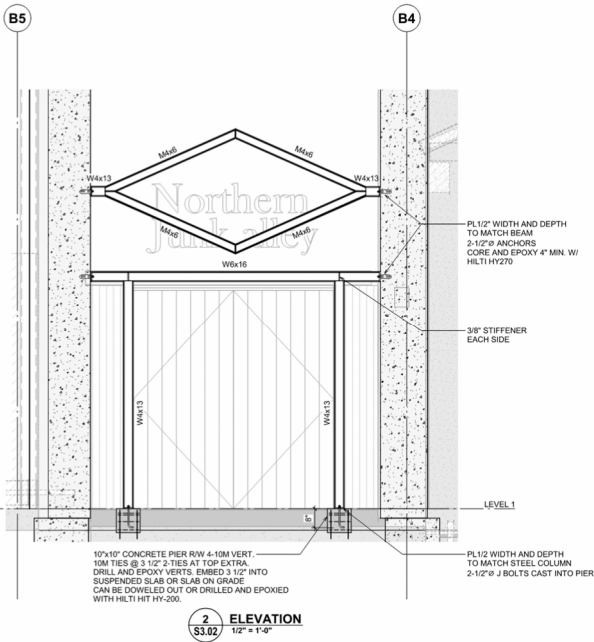


Figure 32 – 1314 Wharf Front Façade Support

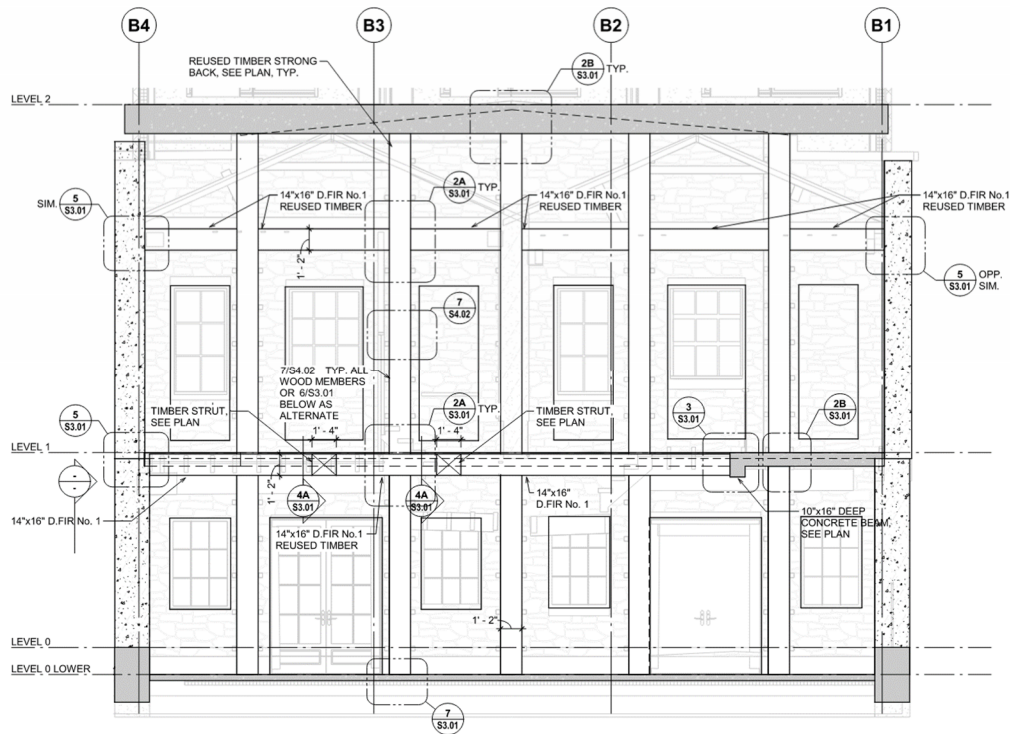


Figure 33 – 1316-1318 Wharf Back Façade Support

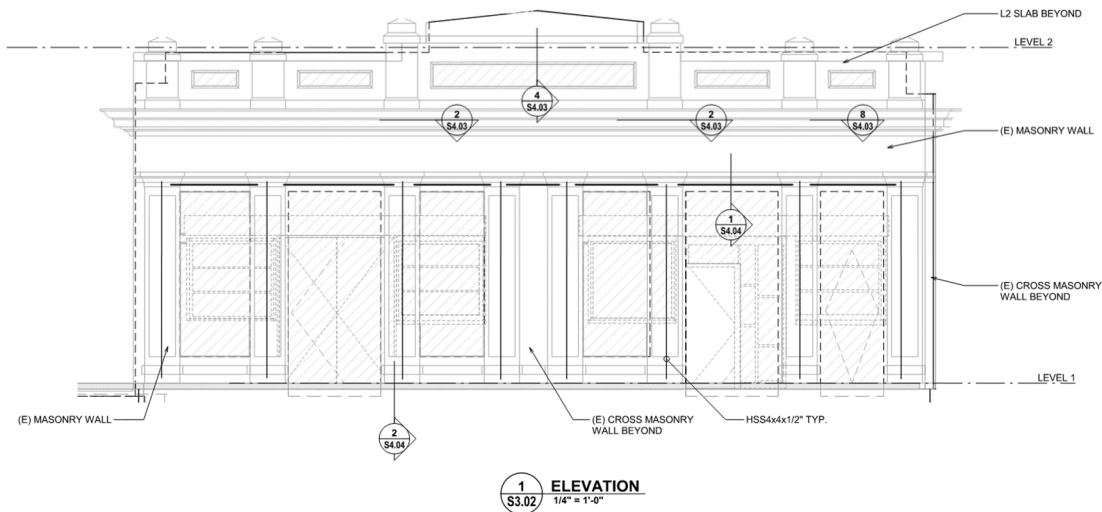
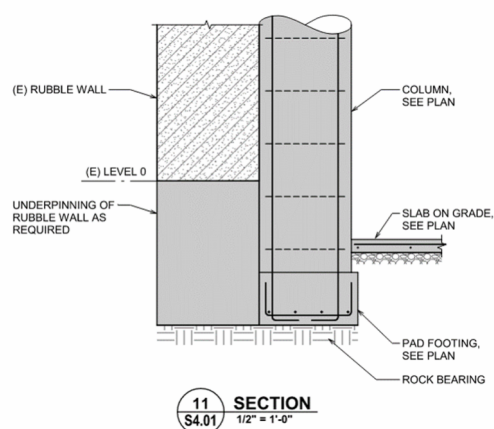


Figure 33 – 1316-1318 Wharf Front Façade Support

## 4.2.2 Foundation Upgrades

The walls for both 1314 and 1316-1318 Wharf Street structures are being supported by stone rubble foundations, which were originally constructed with large, loose cobble-sized stone infilled with smaller stones as well as cement in some locations. These foundations are insufficient to support vertical and lateral loading and require upgrading. The existing walls for both structures will be underpinned, whereby the walls are undermined in short sections and backfilled with new concrete to provide adequate bearing capacity down to the underlying bedrock.



**Figure 34 – Underpinning of Existing Stone Rubble Walls**



## 5.0 COST ASSESSMENT

The costs associated to seismic restraint of the heritage structure breaks down into direct and indirect components as it relates to the TIP application. In general, it is straightforward to quantify the direct costs associated with bracing the façade system back to the main structure as the back-up framing and connections are only being used for this purpose. It is more difficult to quantify what portion of the overall new structural framing is being utilized to support the existing structure against seismic loading demands as this framing supports both old/heritage and new structural elements. In other words, what portion of the cost of the concrete shearwalls and footings can be attributed to the seismic restraint of the heritage retention. It is our understanding that costs related to heritage conservation not related to seismic restraint are not considered as part of the TIP claim. Refer to Appendix A for an assessment of the structural components related to direct and indirect costs. As part of the TIP application, the developer has provided cost estimates split into three estimates, the first being each low bid per subtrade scope ("Low Bid"), the being a higher subtrade bid ("Second Bid"), and the third being an estimate from a professional quantity surveyor (Advicas).

### 5.1 DIRECT COSTS

As discussed previously, 100% of the costs associated with the restraint of the heritage framing can be claimed as part of the TIP application Refer to Appendix A for a summary of these components. We have isolated the components described in the preceding sections and have summarized below:

<b>Low Bid</b>	<b>Second Bid</b>	<b>Advicas</b>
\$2,265,398	\$2,914,584	\$3,133,529

### 5.2 INDIRECT COSTS

In an effort to quantify the costs associated with the lateral support of the heritage framing, the weight of the retained heritage framing was compared to the overall weight, with the weight being directly related to the seismic force to be resisted. We have calculated that the retained heritage framing consists of 14.6% of the overall weight. To this end, 14.6% of the costs associated with the concrete shearwalls, diaphragm reinforcing and concrete footings supporting the shearwalls can be claimed as part of the TIP application. Refer to Appendix A for a summary of the components we have identified as part of these systems.

	<b>Low Bid</b>	<b>Second Bid</b>	<b>Advicas</b>
<b>Construction Costs</b>	\$221,105	\$221,502	\$219,056
<b>General Requirements and Contractor Fee</b>	\$544,674	\$666,682	\$987,258
<b>Total Indirect Costs</b>	<b>\$765,779</b>	<b>\$888,184</b>	<b>\$1,206,314</b>

### 5.3 TOTAL COSTS (DIRECT + INDIRECT)

Find following a summary of the total cost for Low Bid, Second Bid and Advicas:

<b>Low Bid</b>	<b>Second Bid</b>	<b>Advicas</b>
\$3,031,177	\$3,802,775	\$4,339,843



## 6.0 DISCUSSION

The proposed development at 1314 and 1316-1318 Wharf Street will be retaining heritage components of the historic Fraser Warehouse and Caire and Grancini Warehouse as part of the overall development. The developer will induce expenses related to the retention, including costs for both conservation of historic elements as well as the back-up framing to brace these elements against seismic loading. The costs for seismic restraint have been put forward by the developer as part of the City of Victoria's Tax Incentive Program, which requires review by the Heritage Review Panel. Glotman-Simpson Consulting Engineers has been retained to review the structural components of the application, including review of the framing to identify components that are required for seismic restraint as well as cost estimates put forward by the developer.

This report has discussed and identified the proposed structural framing and have broken down the seismic restraint framing into two categories with associated costs: direct, and indirect. The direct costs are for framing exclusively for the seismic restraint of heritage elements, and includes strong-back framing and drilled anchors connecting the strong-backs to the heritage components. The indirect costs are for framing supporting both the heritage framing as well as new building components, and includes new concrete shearwalls and floor diaphragms supporting a full given floor. The indirect costs attributed to seismic restraint are not as clear, as they support both old and new framing. We have used the weight of both old and new components to estimate their contribution to the overall seismic loading, and as an extension what portions of the overall cost can be attributed to each. Using both construction cost estimates as a basis for our assessment, we estimate that the construction costs for seismic restraint to be \$3,031,177 for the subtrade Low Bids, \$3,802,775 for the subtrade Second Bids, and \$4,339,843 for the Advicas estimate.





## 7.0 LIMIT OF LIABILITY & CLOSE-OUT

This Tax Incentive Program assessment is based on a visual inspection of the existing structure and building systems and a review of the available and drawing information, as part of our review. No testing or dismantling of any architectural cladding was performed and inspections were made on a random basis with no attempt to review or inspect every element or portion of the building. The intent of the inspections was to verify the layout shown in the proposed structural engineering drawings provided by Reliance Properties ("Building Permit Application Revision 4" structural drawings by RJC Ltd. dated August 23, 2023), but not to ascertain the quality or sufficiency of any specific aspect of the development. Our comments are limited to determining the framing elements related to the seismic restraint of heritage elements and does not constitute an independent structural peer review complete with design checks. Our comments are not a guarantee or warranty of any aspect of the condition of the development whatsoever.

This report was prepared by Glotman•Simpson Consulting Engineers for the account of the City of Victoria. The material in it reflects the existing structural condition of the existing buildings to our best judgment considering the information available to us at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Glotman•Simpson Consulting Engineers accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

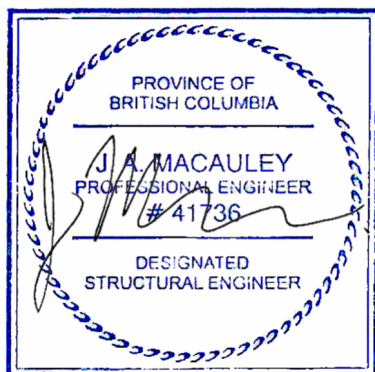
The following items were not examined by us nor were they considered as part of the structural survey of the building:

- condition of the roofing system and any leakage concerns;
- building envelope design and condition issues;
- moisture considerations at exterior walls;
- plumbing, mechanical or electrical considerations;
- fire prevention requirements or condition of existing equipment and systems; and
- presence of hazardous materials such as asbestos, PCB's or toxic industrial waste.

We trust the above is satisfactory for your needs at this time. Please feel free to contact the undersigned if we can provide any further information or clarification on this matter.

Yours truly,

**GLOTMAN•SIMPSON CONSULTING ENGINEERS**



Per: James Macauley, P.Eng, Struct.Eng  
Associate

Per: Levi Stoelting, P.Eng  
Principal



## **APPENDIX A**

### Structural Drawings



ITEMS HIGHLIGHTED IN YELLOW ARE REQUIRED  
FOR SEISMIC RESTRAINT OF THE HERITAGE  
BUILDINGS AND SUPPORT OF THE ADDITIONAL  
FLOORS ABOVE.

FOR COSTING PURPOSES 14.6% OF THE  
MATERIAL COST OF THE HIGHLIGHTED ITEMS  
ARE FOR SUPPORT OF THE HISTORIC ELEMENTS

11	Building Permit Application Revision 4	2023-08-23	AP
10	Review set	2023-07-11	AP
9	Building Permit Application Rev 3	2023-04-10	AP
8	Post-Tender Addendum	2023-02-09	AP
7	Addendum No. 3	2022-11-17	AP
6	Addendum No. 2	2022-11-10	AP
5	Issued for Tender	2022-10-14	AP
4	Issued for Building Permit	2022-06-24	AP
3	90% Progress Set	2022-06-02	PM
2	Issued for 60% Review	2022-03-31	PM
1	Issued for 60% Review	2022-01-13	CP

Drawing Notes

1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.

2. These drawings are "design drawings" only. They may not be suitable for use as shop drawings. Use of these drawings as base drawings for "shop drawings" is not permitted unless written permission containing certain conditions and limitations is obtained from RJC. The work "as constructed" may vary from what is shown on these drawings.

3. Use of these drawings is limited to that identified in the Revision column. Do not construct from these drawings unless marked "Issued for Construction" by RJC in the Revision column, and then only for the parts noted. The drawings shall not be used for "pricing", "costing" or "tender" unless so indicated in the Revision column. "Pricing" or "Costing" drawings are not complete and any prices based on such drawings must allow for this.

Seal

EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

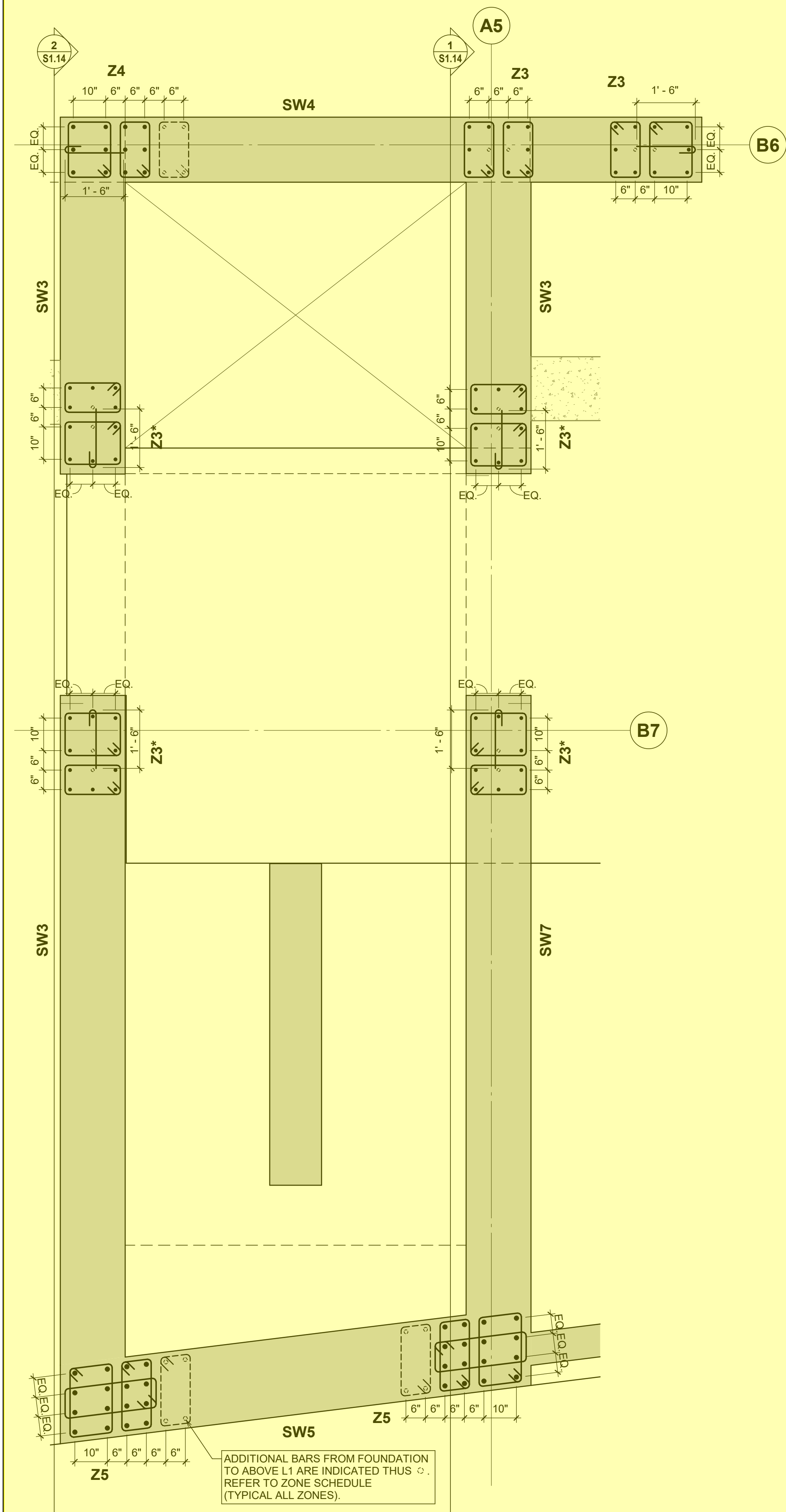
**SEISMIC KEY PLANS AND  
SCHEDULES**

Drawn By	MC	Scale	As indicated
Designed By	AP	Date	2023/08/23
RJC Project Number	VIC.100479.0006		

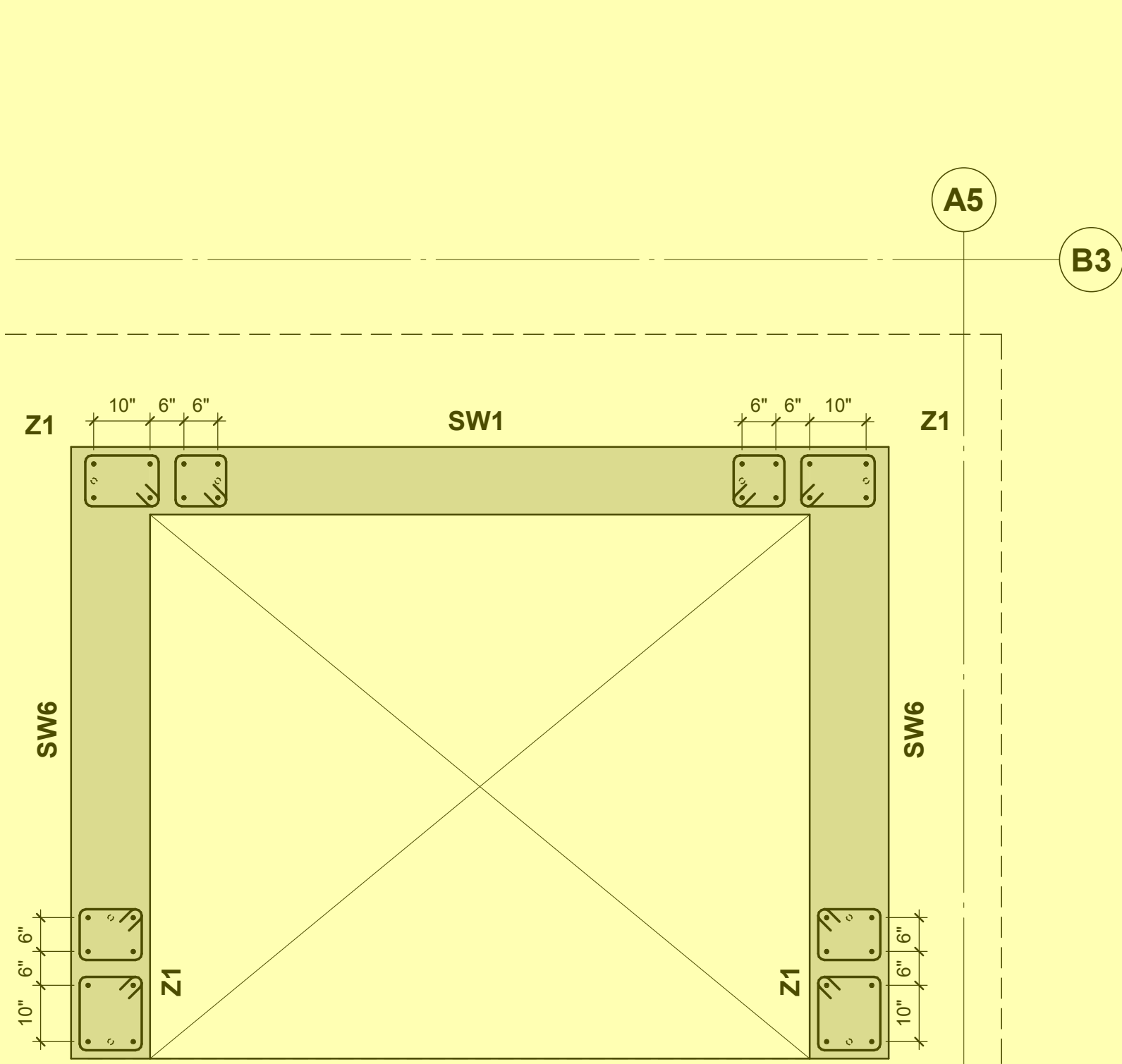
Sheet Number Revision

**S1.13** **11**

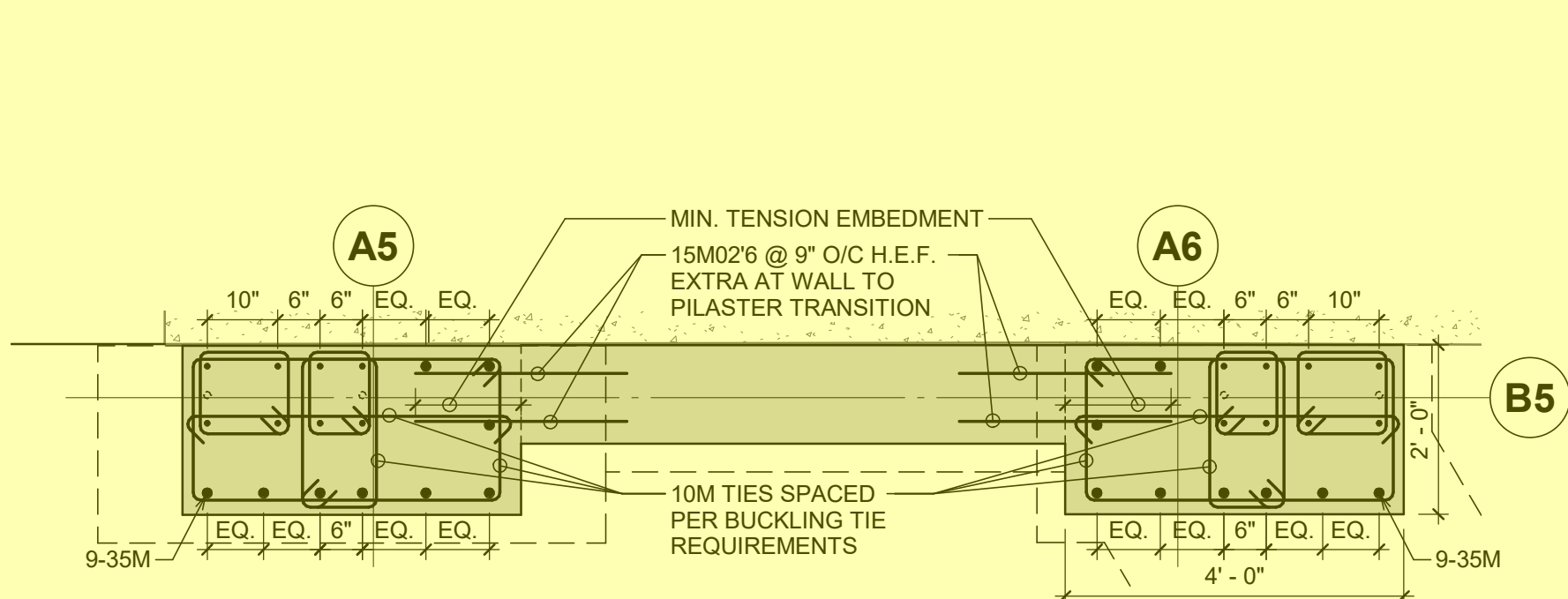
2023-08-23 3:05:41 PM



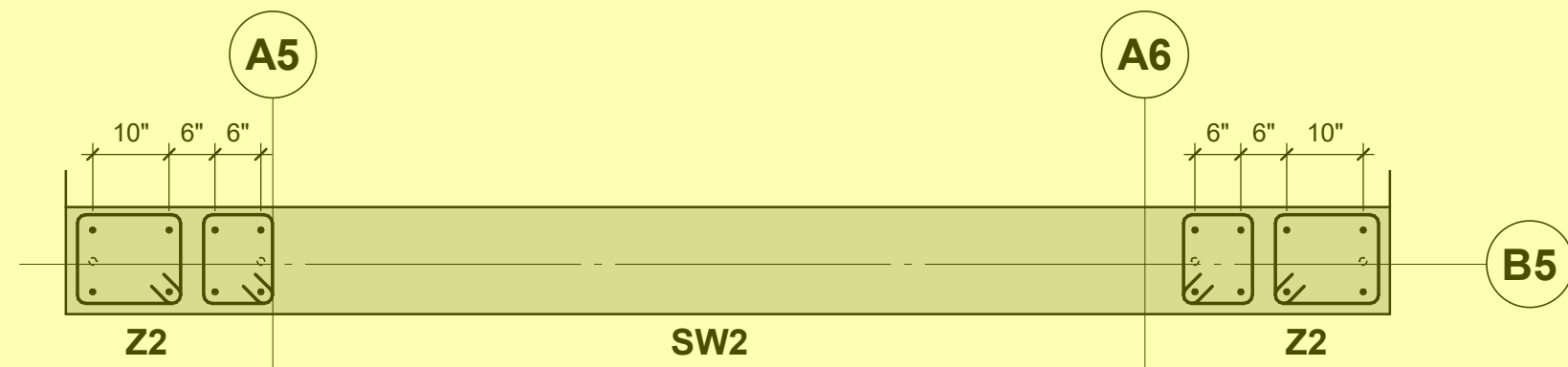
**6 SOUTH CORE PLAN**  
S1.13 1/2" = 1'-0"



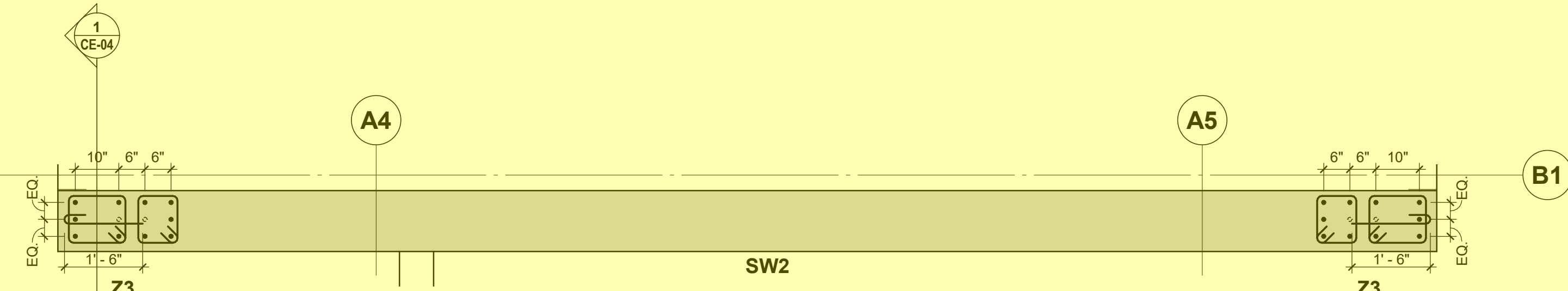
**5 NORTH CORE PLAN**  
S1.13 1/2" = 1'-0"



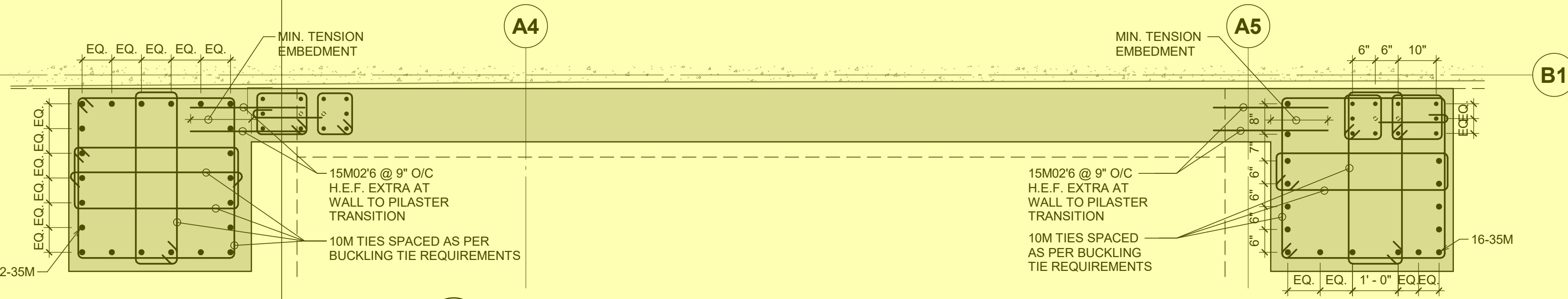
**1 SHEAR WALL AT GL-B5 - L0 TO U/S OF L1**  
S1.13 1/2" = 1'-0"



**2 SHEAR WALL AT GL-B5 - L1 TO ROOF**  
S1.13 1/2" = 1'-0"



**3 NORTH SHEAR WALL - L1 TO ROOF**  
S1.13 1/2" = 1'-0"



**4 NORTH SHEAR WALL - L0 TO U/S OF L1**  
S1.13 1/2" = 1'-0"

**SEISMIC KEY PLAN NOTES**

1. \* - INDICATES THAT BUCKLING PREVENTION TIES SHALL BE USED THE FULL HEIGHT OF ZONE.

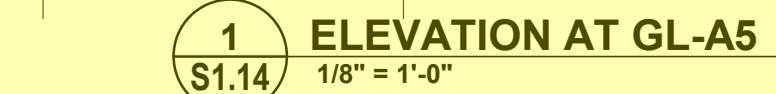
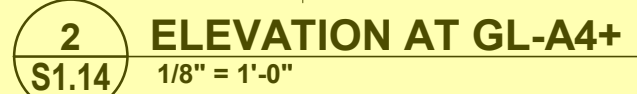
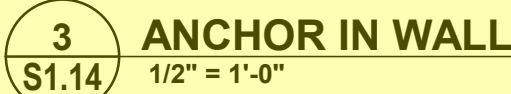
545 Tye Road, Suite 220  
Victoria, BC V9A 6X5 Canada  
Tel 250-386-7794  
Fax 250-381-7900

FOR COSTING PURPOSES 14.6% OF THE MATERIAL COST OF THE HIGHLIGHTED ITEMS ARE FOR SUPPORT OF THE HISTORIC ELEMENTS

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- ## Sea



## CONCRETE SHEAR WALL SCHEDULE

## ZONE SCHEDULE

Project Name

**1314-1318 Wharf Street, Victoria B.C.**

Sheet Title

## SHEAR WALL ELEVATIONS

Designed By **AP** Date **2023/08/23**RJC Project Number **VIC.100479.0006**

Sheet Number Revision

S1 14 0

## S1.14

9



- ITEMS HIGHLIGHTED IN RED ARE REQUIRED FOR SEISMIC RESTRAINT OF THE HERITAGE BUILDINGS
- ITEMS HIGHLIGHTED IN YELLOW ARE REQUIRED FOR SEISMIC RESTRAINT OF THE HERITAGE BUILDINGS AND SUPPORT OF THE ADDITIONAL FLOORS ABOVE
- FOR COSTING PURPOSES 14.6% OF THE MATERIAL COST OF THE HIGHLIGHTED ITEMS ARE FOR SUPPORT OF THE HISTORIC ELEMENTS
- ITEMS HIGHLIGHTED IN GREEN ARE REPURPOSED WOOD ELEMENTS FROM THE EXISTING FLOOR AND ROOF STRUCTURE
- THESE ITEMS ARE REQUIRED FOR RESTRAINT OF THE HERITAGE BUILDING

### STRONG BACK SCHEDULE

MARK	SIZE	COMMENTS
SB1	10" x 8" D.FIR No.1	RE-USE (E) TIMBER, IF AVAILABLE
SB2	12" x 10" D.FIR No.1	RE-USE (E) TIMBER, IF AVAILABLE
SB3	16" x 14" D.FIR No.1	RE-USE (E) TIMBER
SB4	HSS 6" x 6" x 0.250	
SB5	HSS 7" x 7" x 0.5	
SB6	HSS 8" x 8" x 0.5	

NOTE: 1. REUSED TIMBER SHALL BE GRADED PRIOR TO INSTALLATION.  
2. SEE DETAILS 6/S4.02 AND 7/S4.02 FOR ADDITIONAL DETAILS.

### ROCK ANCHOR SCHEDULE

MARK	SIZE	COMMENTS
RA1	#18 DYWIDAG ROCK ANCHOR	HOT-ROLLED THREAD BAR Fy = 1423 kN (320 Kips)
RA2	#20 DYWIDAG ROCK ANCHOR	HOT-ROLLED THREAD BAR Fy = 1748 kN (394 Kips)
RA3	#24 DYWIDAG ROCK ANCHOR	COLD-ROLLED THREAD BAR Fy = 2355 kN (530 Kips)
RA4	#28 DYWIDAG ROCK ANCHOR	COLD-ROLLED THREAD BAR Fy = 3209 kN (722 Kips)

NOTE: 1. SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.  
2. #24 COLD-ROLLED THREAD BAR CAN BE REPLACED WITH 2 1/2" ASTM A722  
Fy = 2754 kN (620 Kips)  
3. #28 COLD-ROLLED THREAD BAR CAN BE REPLACED WITH 3" ASTM A722  
Fy = 3656 kN (822 Kips).

### GRADE BEAM SCHEDULE

MARK	SIZE	REINFORCING
GB1	4'-0" x 5'-0" DEEP	12-30M H.2.E. TOP; 10-25M H.2.E. BOT. 15M (8-LEGS) STIRRUPS @ 16"
GB2	4'-0" x 5'-6" DEEP	10-25M H.2.E. TOP; 12-35M H.2.E. BOT. 10M (8-LEGS) STIRRUPS @ 16"
GB3	5'-0" x 5'-6" DEEP	14-35M TOP; 20-35M BOT. 15M (10-LEGS) STIRRUPS @ 8"

NOTE: f<sub>c</sub> = 45MPa U.N.O.

### CONCRETE COLUMN SCHEDULE

MARK	SIZE	REINFORCING
CC1	24" Ø	8-25M VERT. 10M @ 6" TIES
CC2	30" Ø	12-25M VERT. 10M @ 6" TIES
CC3	16" x 28"	12-20M VERT. 10M @ 4 1/2" TIES
CC4	16" Ø	6-20M VERT. 10M @ 4 1/2" TIES
CC5	10" x 24"	10-25M VERT. 10M @ 5" TIES

NOTE: 1. (TR) DENOTES TRANSFER COLUMN

### PAD FOOTING SCHEDULE

MARK	SIZE	REINFORCING
PF1	2'-6" x 3'-6" x 16" DEEP	4-20M H.2.E. L.W. BOT. 7-20M H.2.E. S.W. BOT.
PF2	3'-6" x 3'-6" x 16" DEEP	5-20M H.2.E. E.W. BOT.
PF3	2'-6" x 6'-6" x 30" DEEP	6-25M H.2.E. L.W. BOT. 10-20M H.2.E. S.W. BOT.
PF4	2'-6" x 3'-0" x 16" DEEP	4-20M H.2.E. E.W. BOT.
PF5	4'-4" x 8'-5" x 32" DEEP	10-35M H.2.E. L.W. BOT. 12-20M H.2.E. S.W. BOT.
PF6	2'-4" x 6'-0" x 36" DEEP	5-20M H.2.E. L.W. BOT. 6-20M H.2.E. S.W. BOT.
PF7	4'-4" x 14'-0" x 48" DEEP	20-35M H.2.E. (2 LAYERS) L.W. BOT. 10-20M H.2.E. L.W. TOP 16-20M H.2.E. S.W. TOP AND BOT.

### STRIP FOOTING SCHEDULE

MARK	SIZE	REINFORCING
SF1	1'-4" x 10" DEEP x CONT.	2-15M CONT. BOT.
SF2	1'-6" x 12" DEEP x CONT.	2-15M CONT. BOT.
SF3	2'-8" x 1'-8" DEEP x CONT.	4-25M H.2.E. TOP AND BOT. 10M (4 LEG) STIRRUPS @ 8" O.C.

11	Building Permit Application Revision 4	2023-08-23	AP
10	Review set	2023-07-11	AP
9	Building Permit Application Rev 3	2023-04-10	AP
8	Post-Tender Addendum	2023-02-09	AP
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5	Issued for Tender	2022-10-14	AP
4	Issued for Building Permit	2022-06-24	AP
3	90% Progress Set	2022-06-02	PM
2	Issued for 60% Review	2022-03-31	PM
1	Issued for 60% Review	2022-01-13	CP

#### Drawing Notes

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Seal

EGBC Permit to Practice No. 1002503

Project Name

Northern Junk

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

LEVEL 0 CONCRETE  
OUTLINE PLAN

Drawn By MC Scale As indicated

Designed By AP Date 2023/08/23

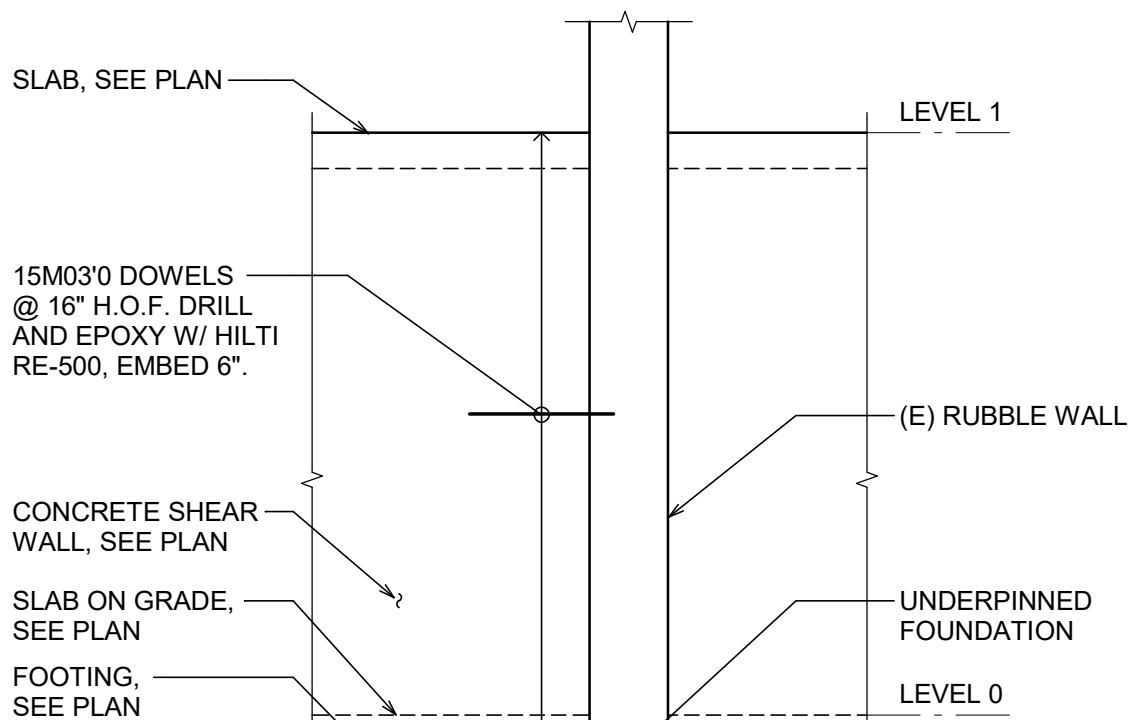
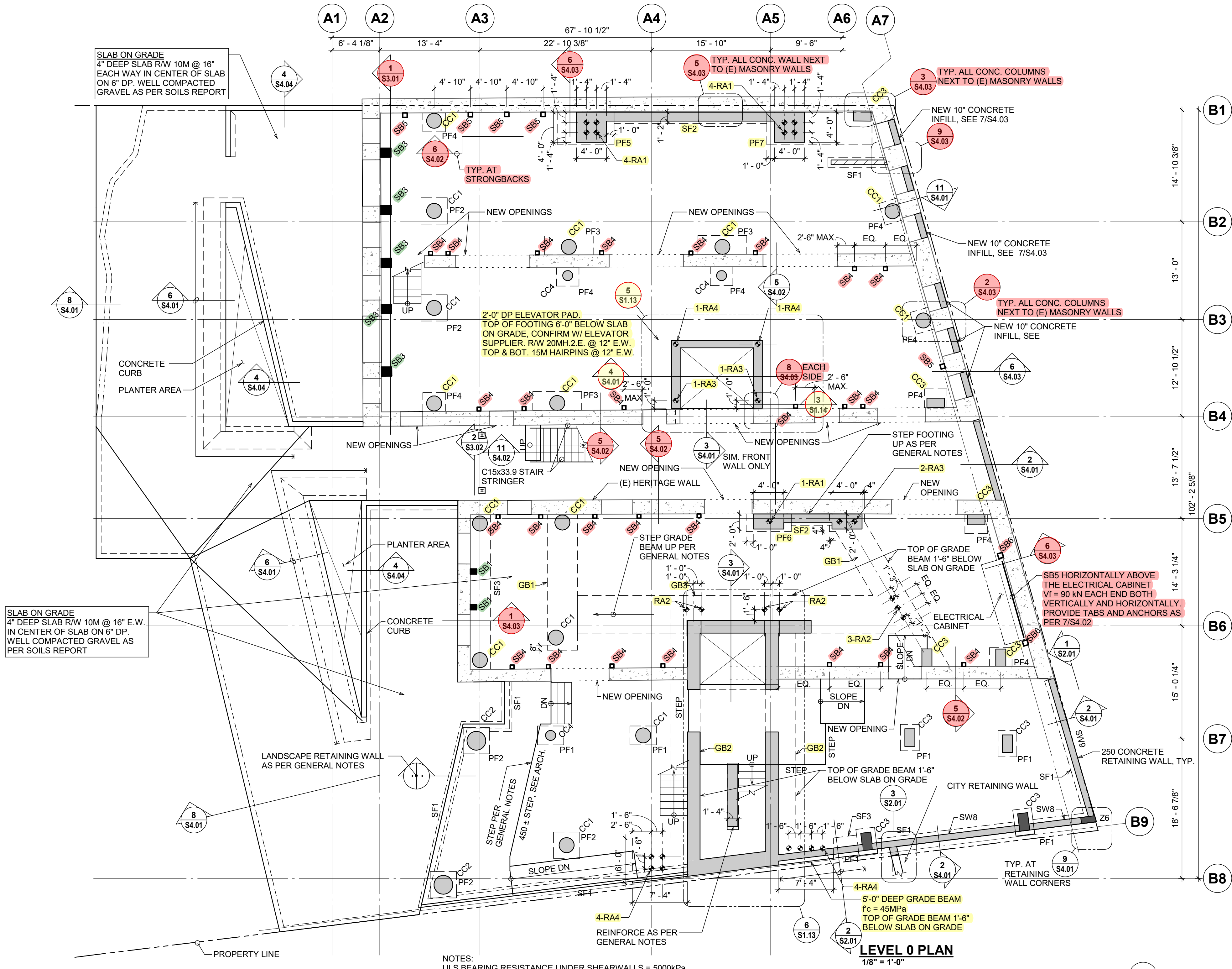
RJC Project Number VIC.100479.0006

Sheet Number Revision

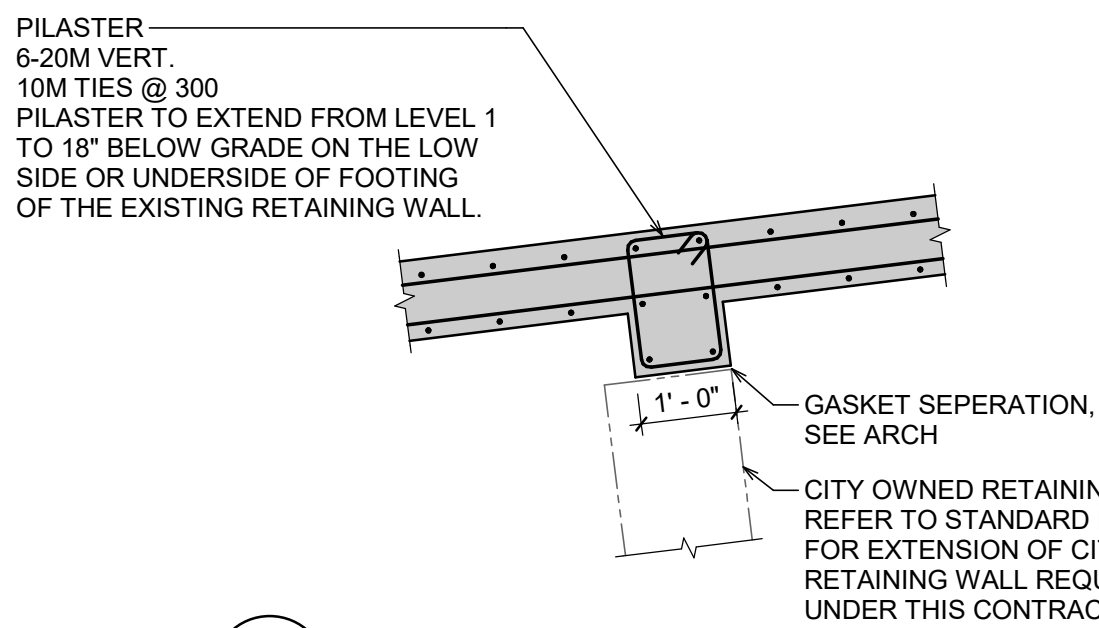
S2.01

11

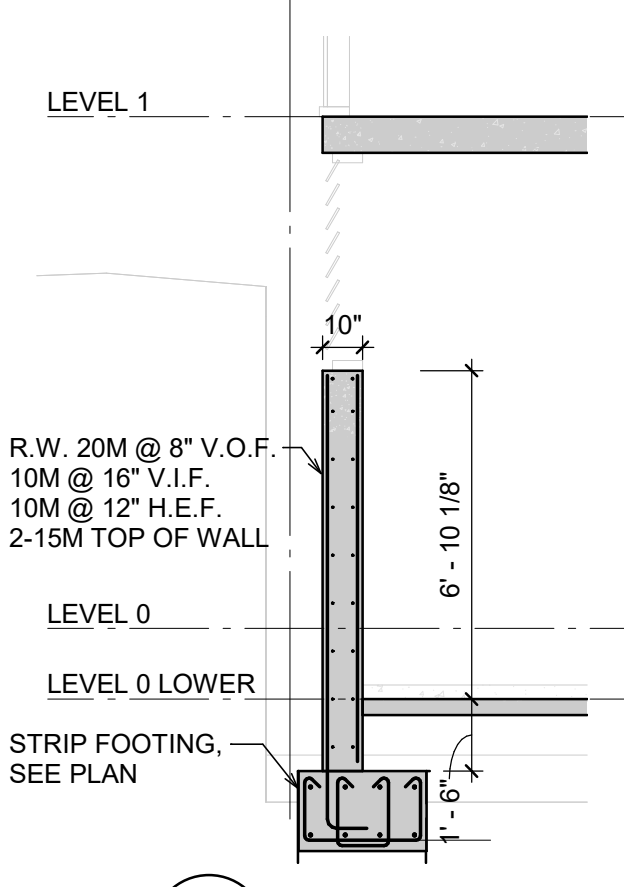
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1 SECTION  
1/4" = 1'-0"



3 RETAINING WALL CONNECTION  
1/2" = 1'-0"



2 SECTION  
1/4" = 1'-0"



11	Building Permit Application Revision 4	2023-08-23	AP
10	Review set	2023-07-11	AP
9	Building Permit Application Rev 3	2023-04-10	AP
8	Post-Tender Addendum	2023-02-09	AP
7	Addendum No. 3	2022-11-17	AP
6	Addendum No. 2	2022-11-10	AP
5	Issued for Tender	2022-10-14	AP
4	Issued for Building Permit	2022-06-24	AP
3	90% Progress Set	2022-06-02	PM
2	Issued for 60% Review	2022-03-31	PM
1	Issued for 60% Review	2022-01-13	CP
No.	Revision	Date	By

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Seal

EGBC Permit to Practice No. 1002503

Project Name

Northern Junk

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

LEVEL 1 CONCRETE  
OUTLINE PLAN

Drawn By MC Scale As indicated

Designed By AP Date 2023/08/23

RJC Project Number VIC.100479.0006

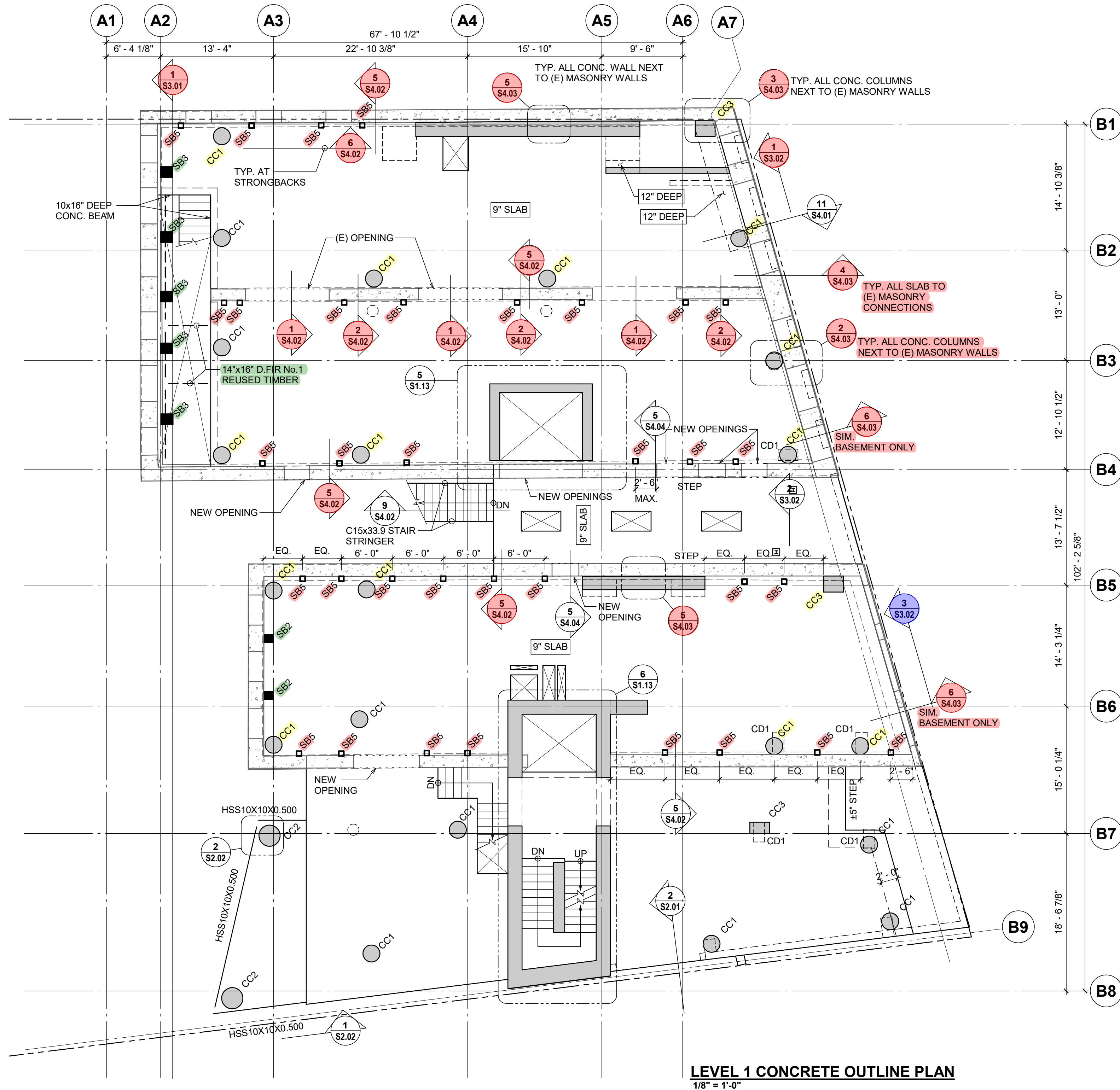
Sheet Number

S2.02

Revision

11

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- ITEMS HIGHLIGHTED IN RED ARE REQUIRED FOR SEISMIC RESTRAINT OF THE HERITAGE BUILDINGS
- ITEMS HIGHLIGHTED IN YELLOW ARE REQUIRED FOR SEISMIC RESTRAINT OF THE HERITAGE BUILDINGS AND SUPPORT OF THE ADDITIONAL FLOORS ABOVE
- FOR COSTING PURPOSES 14.6% OF THE MATERIAL COST OF THE HIGHLIGHTED ITEMS ARE FOR SUPPORT OF THE HISTORIC ELEMENTS
- ITEMS HIGHLIGHTED IN GREEN ARE REPURPOSED WOOD ELEMENTS FROM THE EXISTING FLOOR AND ROOF STRUCTURE
- ITEMS HIGHLIGHTED IN BLUE ARE EFFORTS TO REINSTATE THE ORIGINAL HERITAGE FACADE WHICH WAS DEMOLISHED PRIOR TO THIS OWNER

COLUMN DOWEL SCHEDULE

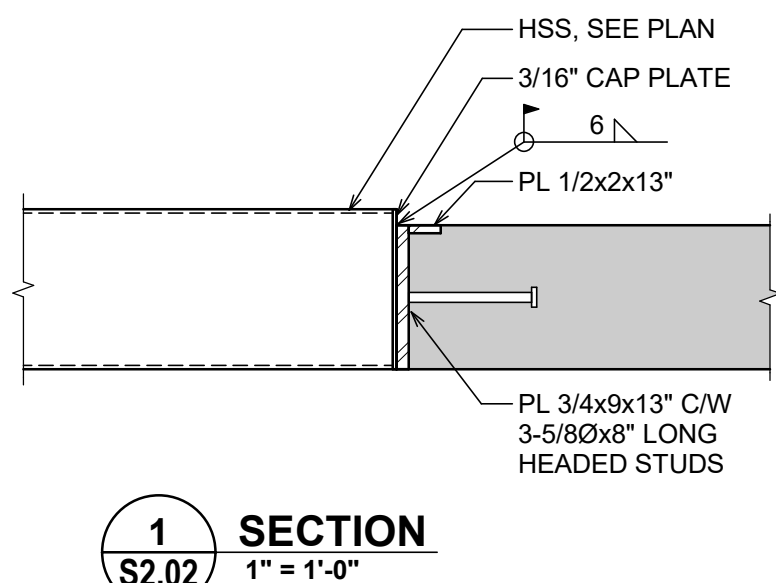
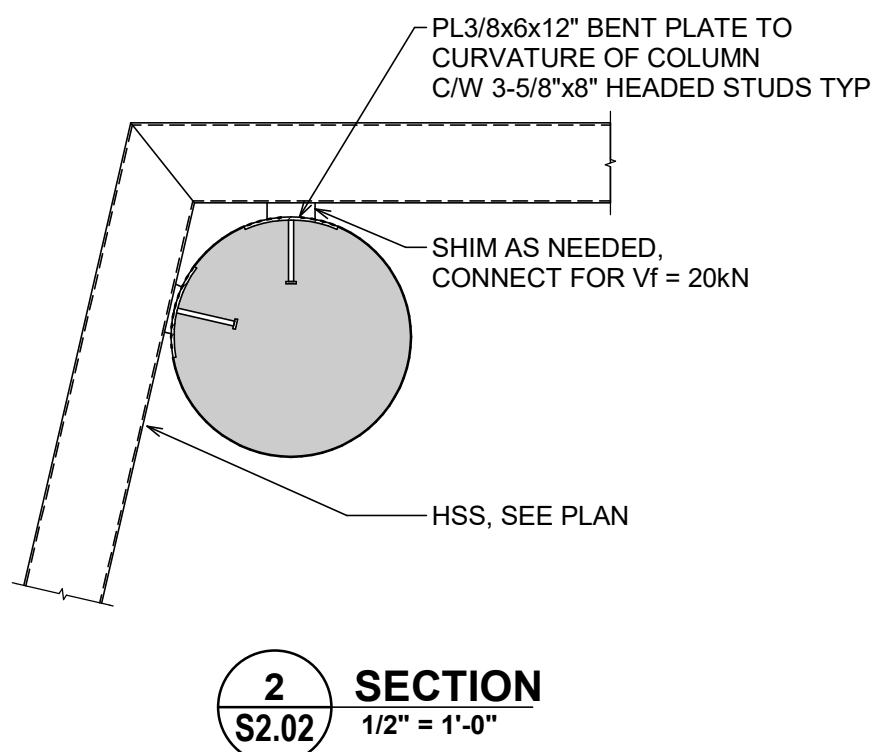
MARK	REINFORCING
CD1	2-25M OR EQUIVALENT
NOTES: - REINFORCING NOTED IN SCHEDULE IS THE MINIMUM AMOUNT OF REINFORCEMENT REQUIRED IN THE COLUMN OVERLAP - COLUMN VERTS. FROM BELOW SHALL EXTEND THROUGH THE OVERLAP ZONE WHERE POSSIBLE PER GENERAL NOTES.	

STRONG BACK SCHEDULE

MARK	SIZE	COMMENTS
SB1	10" x 8" D.FIR No.1	RE-USE (E) TIMBER, IF AVAILABLE
SB2	12" x 10" D.FIR No.1	RE-USE (E) TIMBER, IF AVAILABLE
SB3	16" x 14" D.FIR No.1	RE-USE (E) TIMBER
SB4	HSS 6" x 6" x 0.250	
SB5	HSS 7" x 7" x 0.5	
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NOTE: 1. REUSED TIMBER SHALL BE GRADED PRIOR TO INSTALLATION. 2. SEE DETAILS 6/S4.02 AND 7/S4.02 FOR ADDITIONAL DETAILS.		

CONCRETE COLUMN SCHEDULE

MARK	SIZE	REINFORCING
CC1	24" Ø	8-25M VERT. 10M @ 6" TIES
CC2	30" Ø	12-25M VERT. 10M @ 6" TIES
CC3	16" x 28"	12-20M VERT. 10M @ 4 1/2" TIES
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CC5	10" x 24"	10-25M VERT. 10M @ 5" TIES
NOTE: 1. (TR) DENOTES TRANSFER COLUMN		





ITEMS HIGHLIGHTED IN GREEN ARE  
REPURPOSED WOOD ELEMENTS FROM THE  
EXISTING FLOOR AND ROOF STRUCTURE  
  
THESE ITEMS ARE REQUIRED FOR  
RESTRAINT OF THE HERITAGE BUILDING

11	Building Permit Application Revision 4	2023-08-23	AP
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2	Issued for 60% Review	2022-03-31	PM
1	Issued for 60% Review	2022-01-13	CP

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Seal

EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

**1314-1318 Wharf Street, Victoria B.C.**

Sheet Title

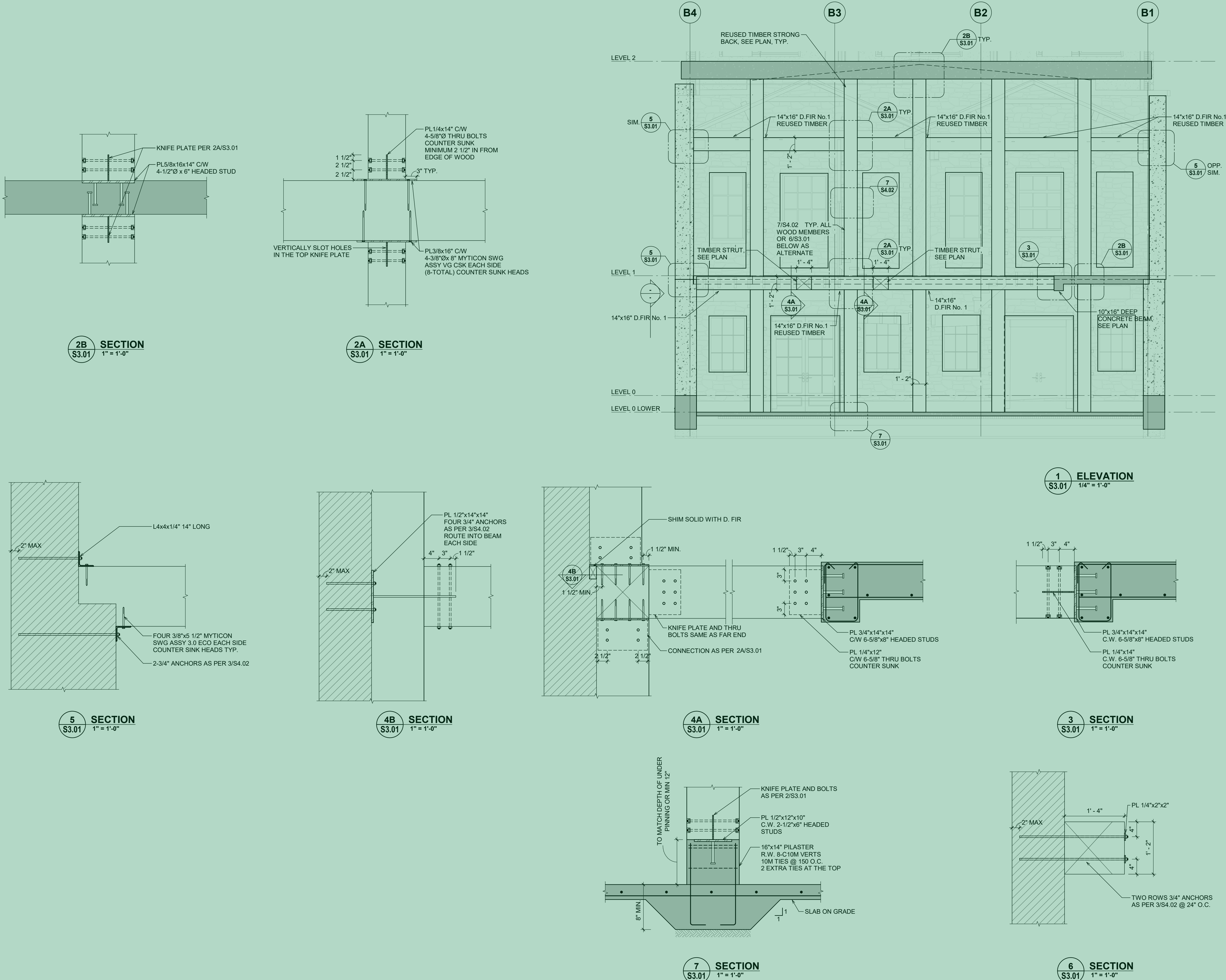
**ELEVATIONS**

Drawn By	MC	Scale	As indicated
Designed By	AP	Date	2023/08/23
RJC Project Number	VIC.100479.0006		

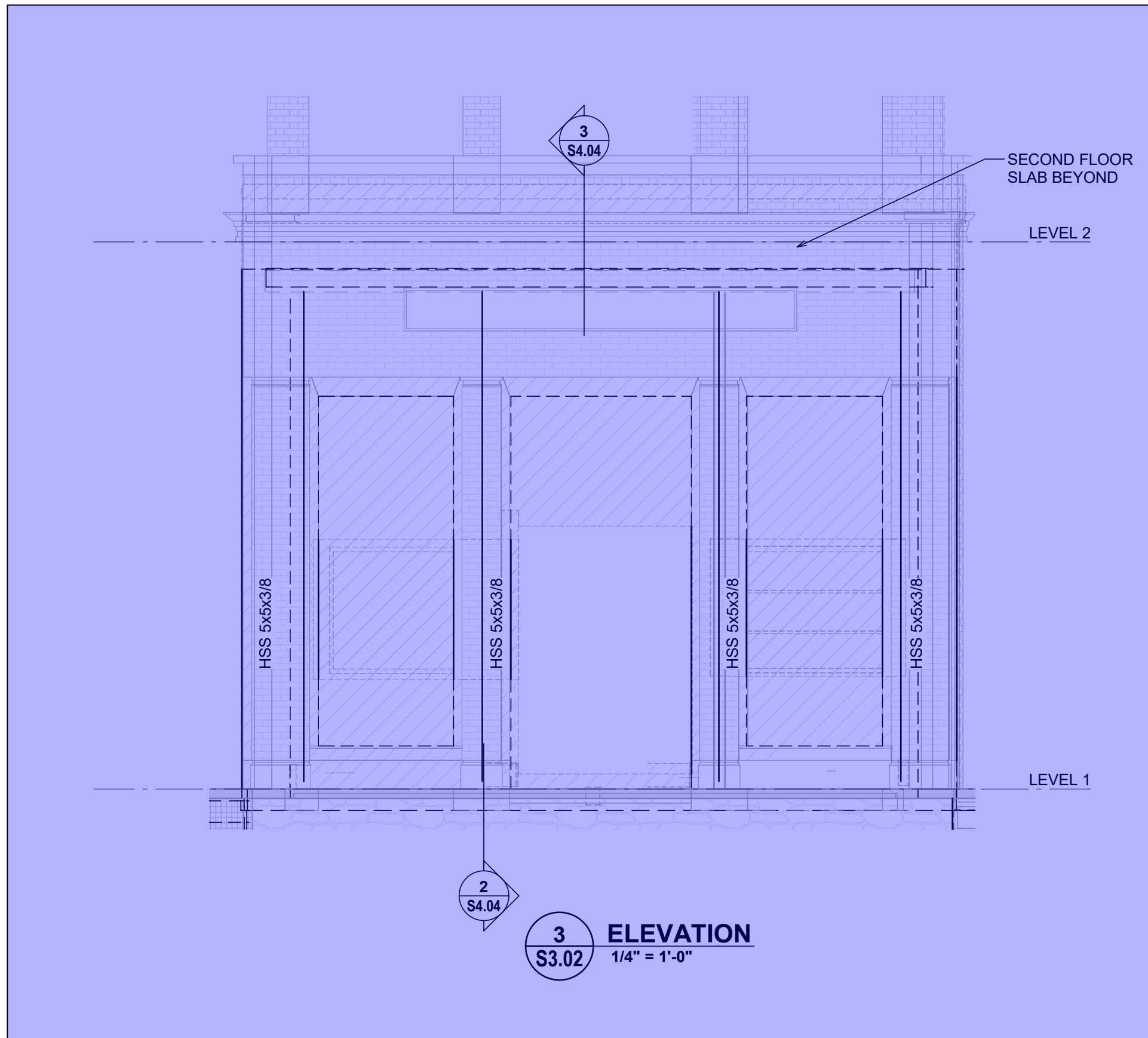
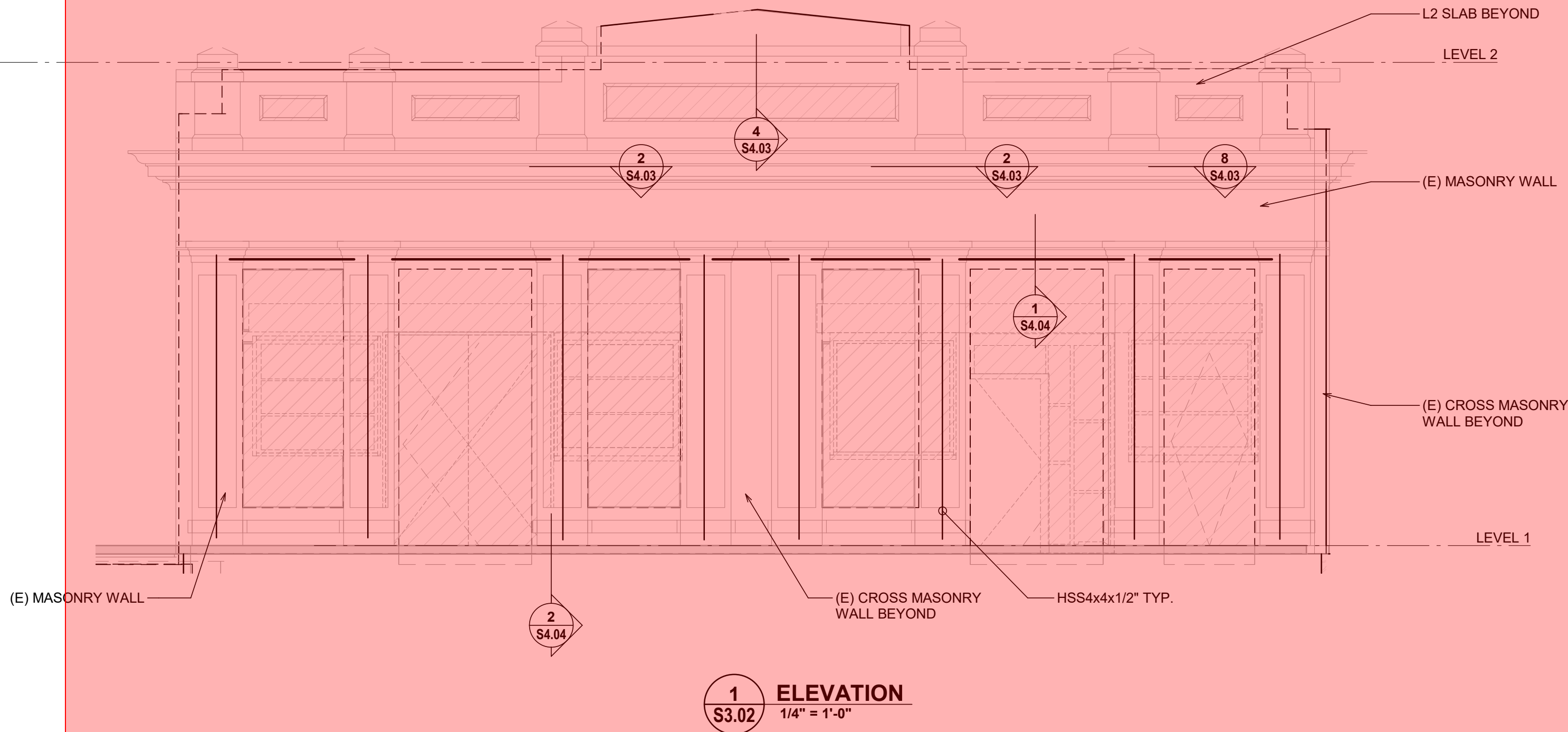
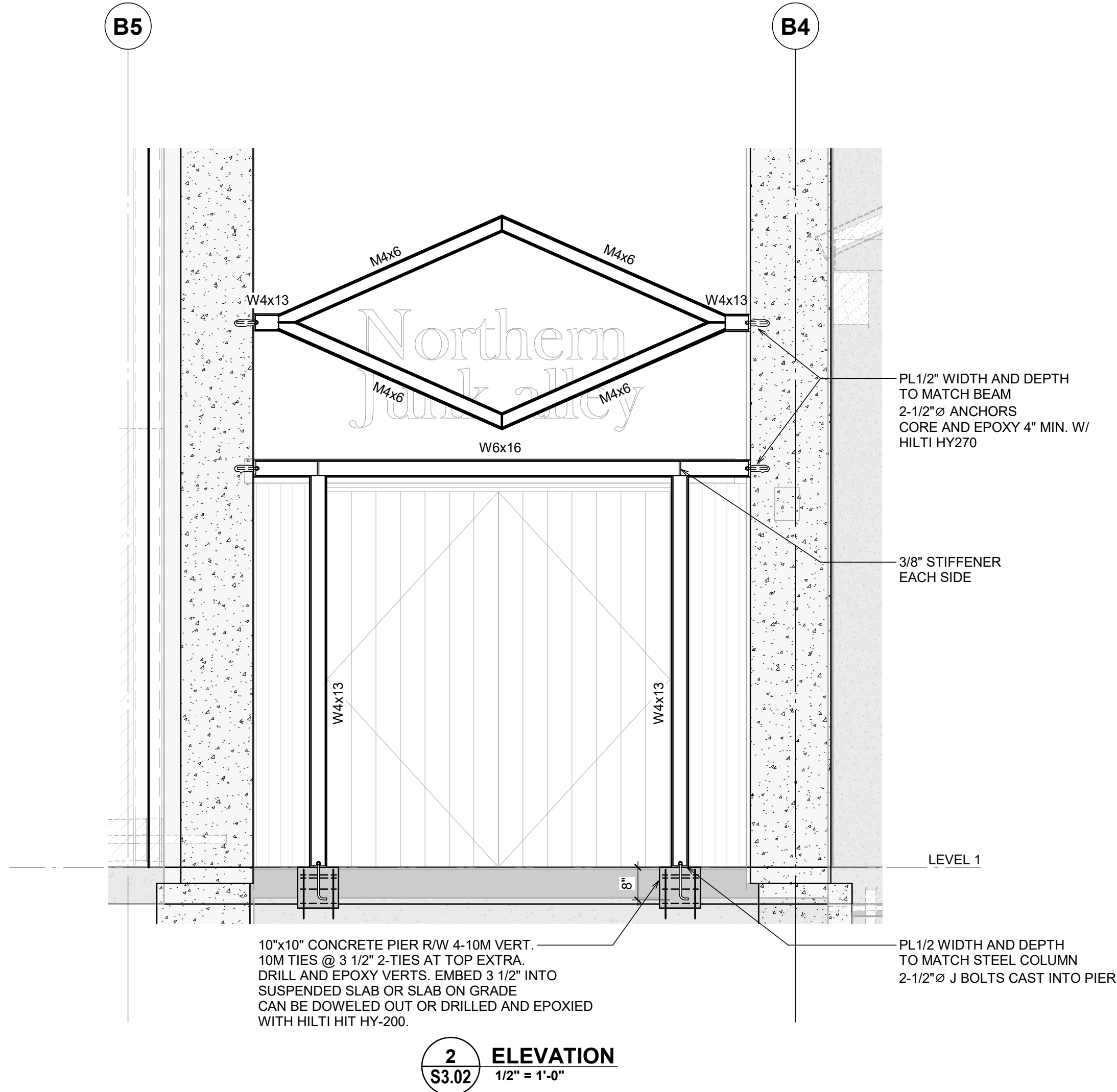
Sheet Number	Revision
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**S3.01** **11**

2023-08-23 3:05:55 PM







Read Jones Christoffersen Ltd.  
Engineers  
rjc.ca

645 Tye Road, Suite 220  
Victoria, BC V9A 6X5 Canada  
tel 250-386-7794  
fax 250-381-7900

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No.	Revision	Date	By

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EGBC Permit to Practice No. 1002503

Project Name

Northern Junk

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

ELEVATIONS

Drawn By MC Scale As indicated

Designed By AP Date 2023/08/23

RJC Project Number VIC.100479.0006

Sheet Number Revision

S3.02 11

2023-08-23 3:05:56 PM



ITEMS HIGHLIGHTED IN YELLOW ARE REQUIRED FOR SEISMIC RESTRAINT OF THE HERITAGE BUILDINGS AND SUPPORT OF THE ADDITIONAL FLOORS ABOVE.

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Seal

EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

**SECTIONS AND DETAILS**

Drawn By **MC** Scale **1/2" = 1'-0"**

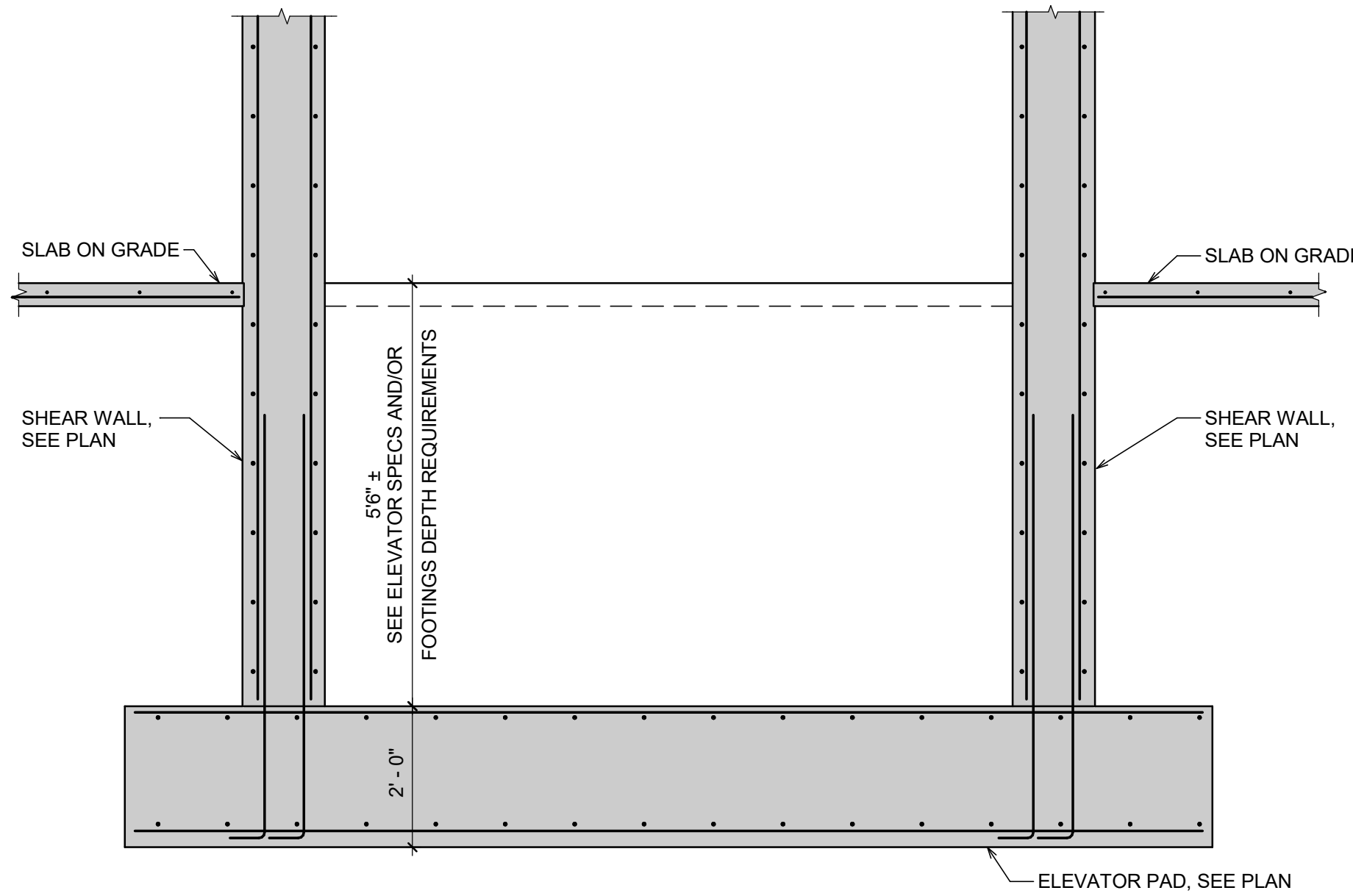
Designed By **AP** Date **2023/08/23**

RJC Project Number **VIC.100479.0006**

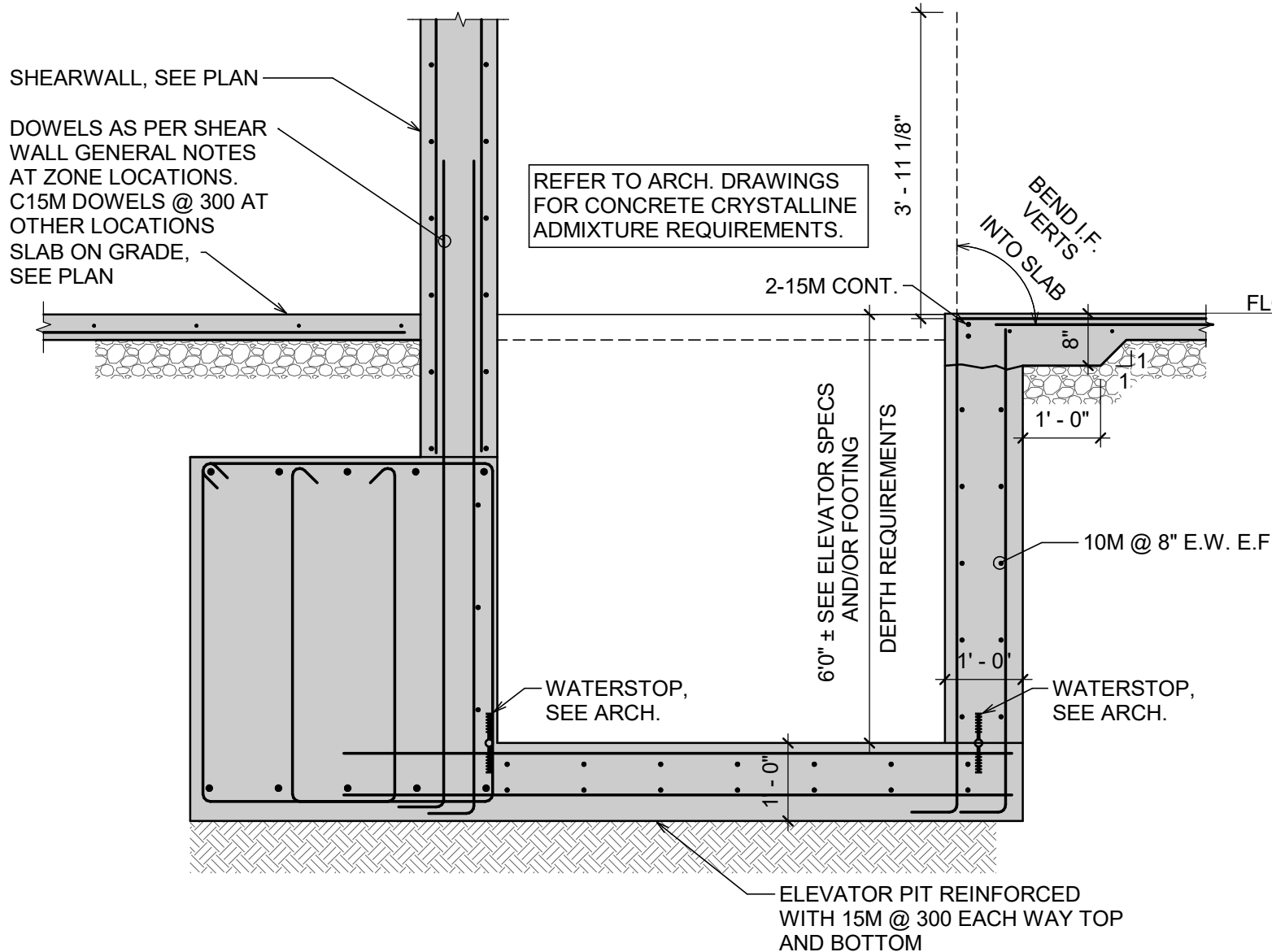
Sheet Number Revision

**S4.01** **11**

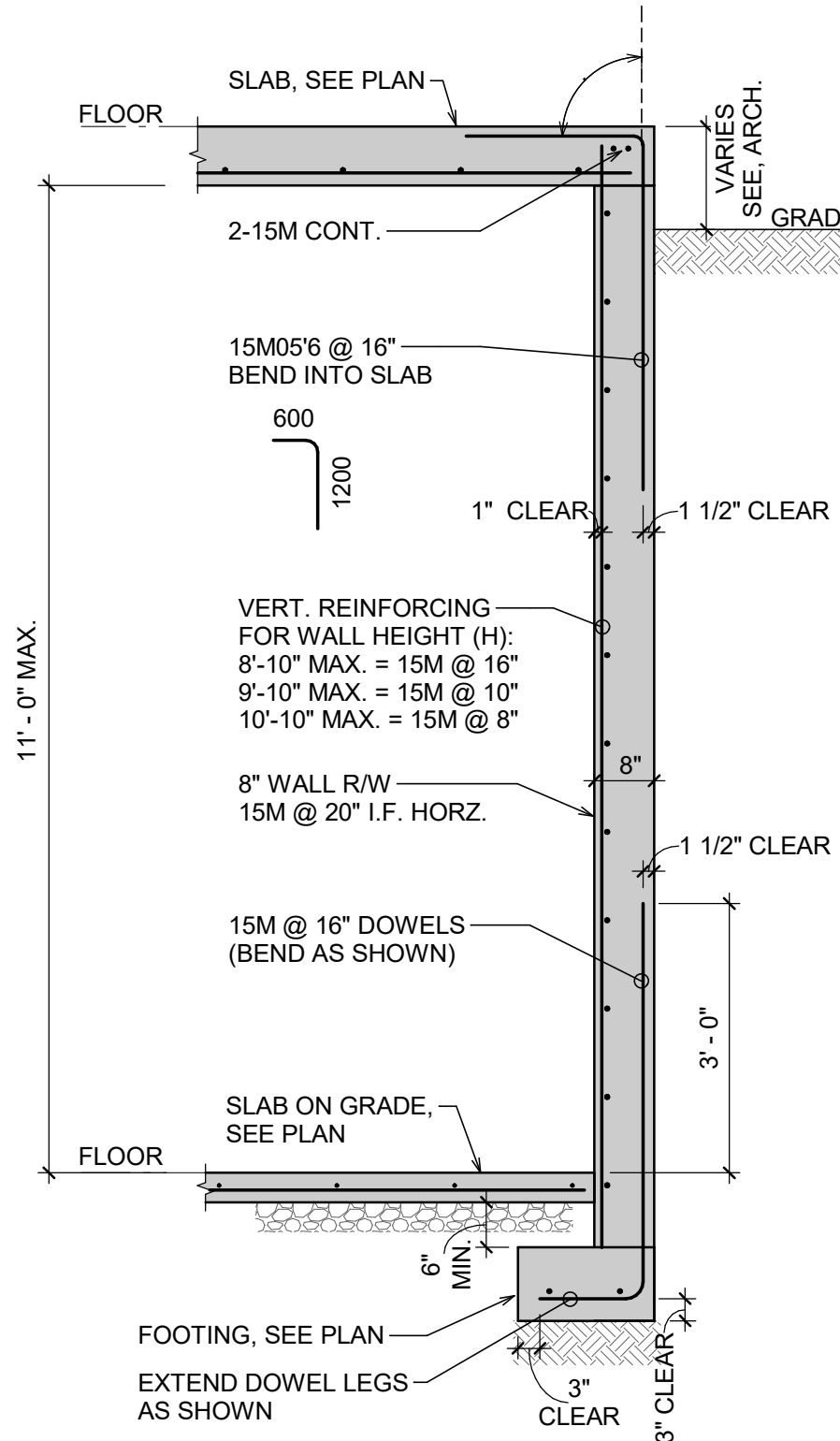
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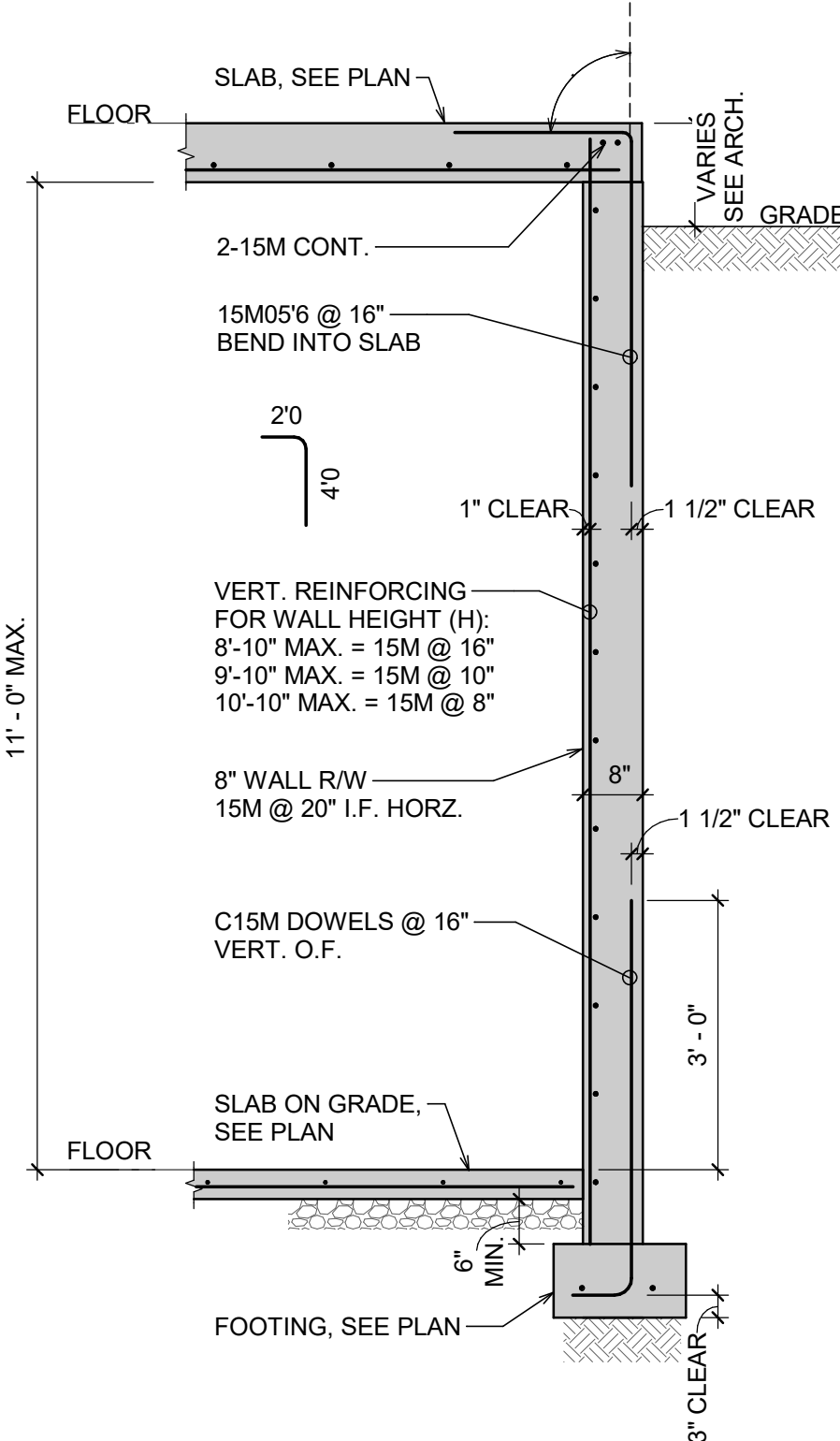
**4 NORTH ELEVATOR PIT**  
1/2" = 1'-0"



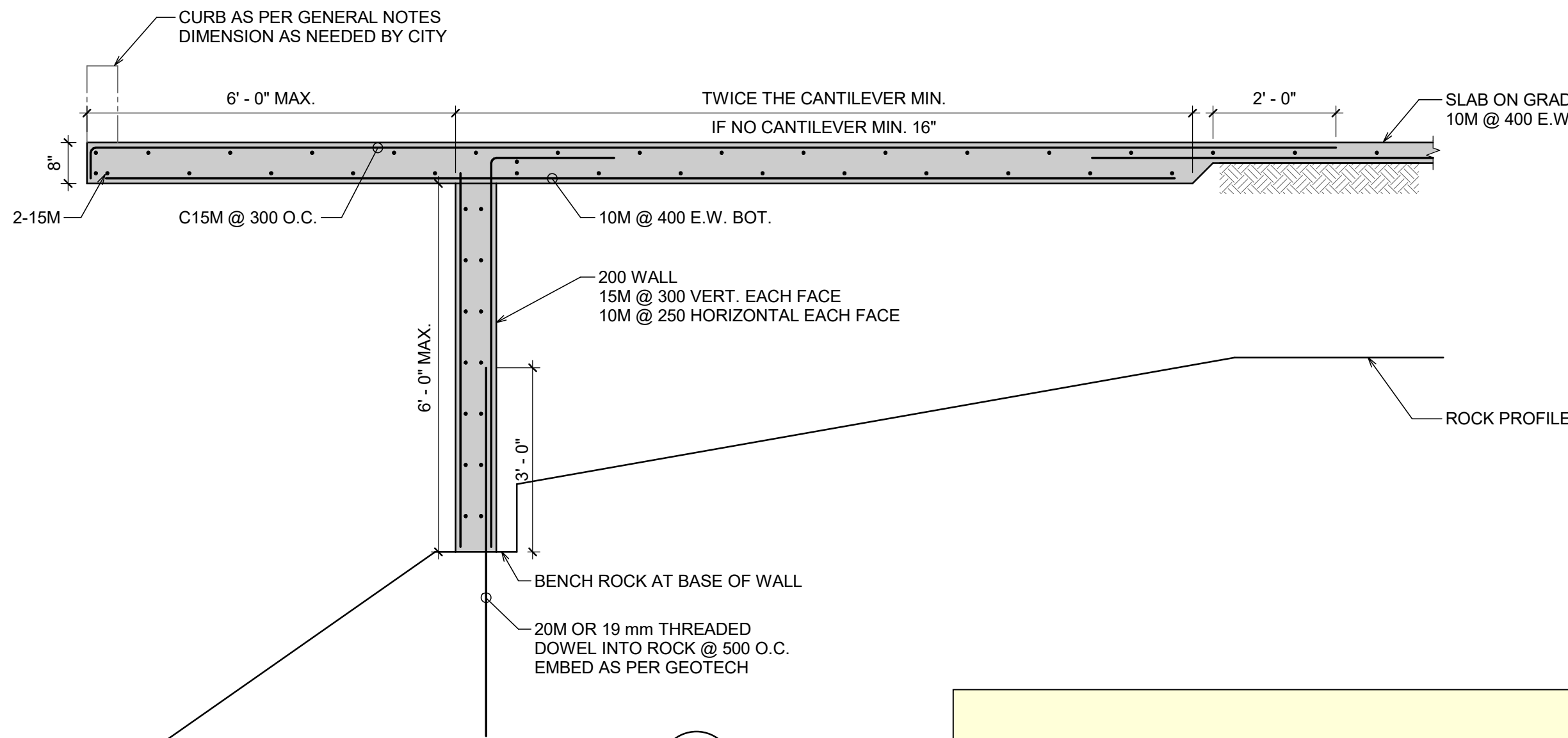
**3 SOUTH ELEVATOR PIT**  
1/2" = 1'-0"



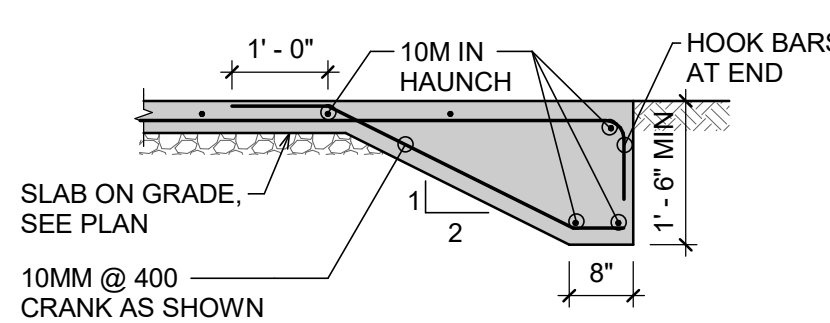
**2 TYPICAL TOE-IN RETAINING WALL**  
1/2" = 1'-0"



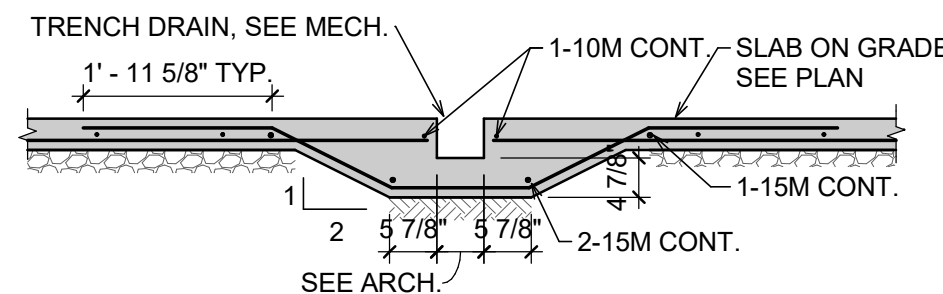
**1 TYPICAL RETAINING WALL**  
1/2" = 1'-0"



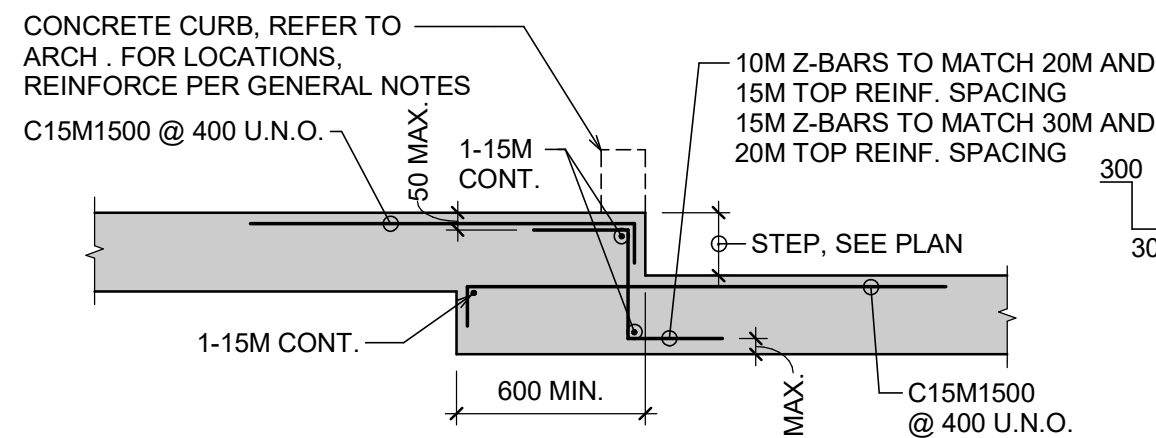
**8 SECTION**  
1/2" = 1'-0"



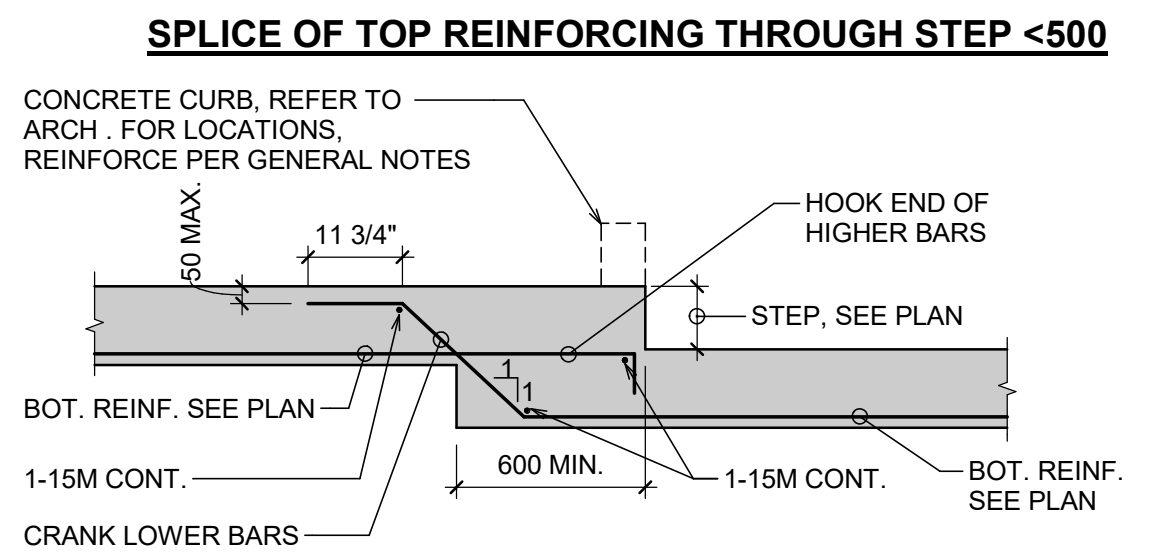
**6 TYPICAL SLAB ON GRADE THICKENING AT EXTERIOR**  
1/2" = 1'-0"



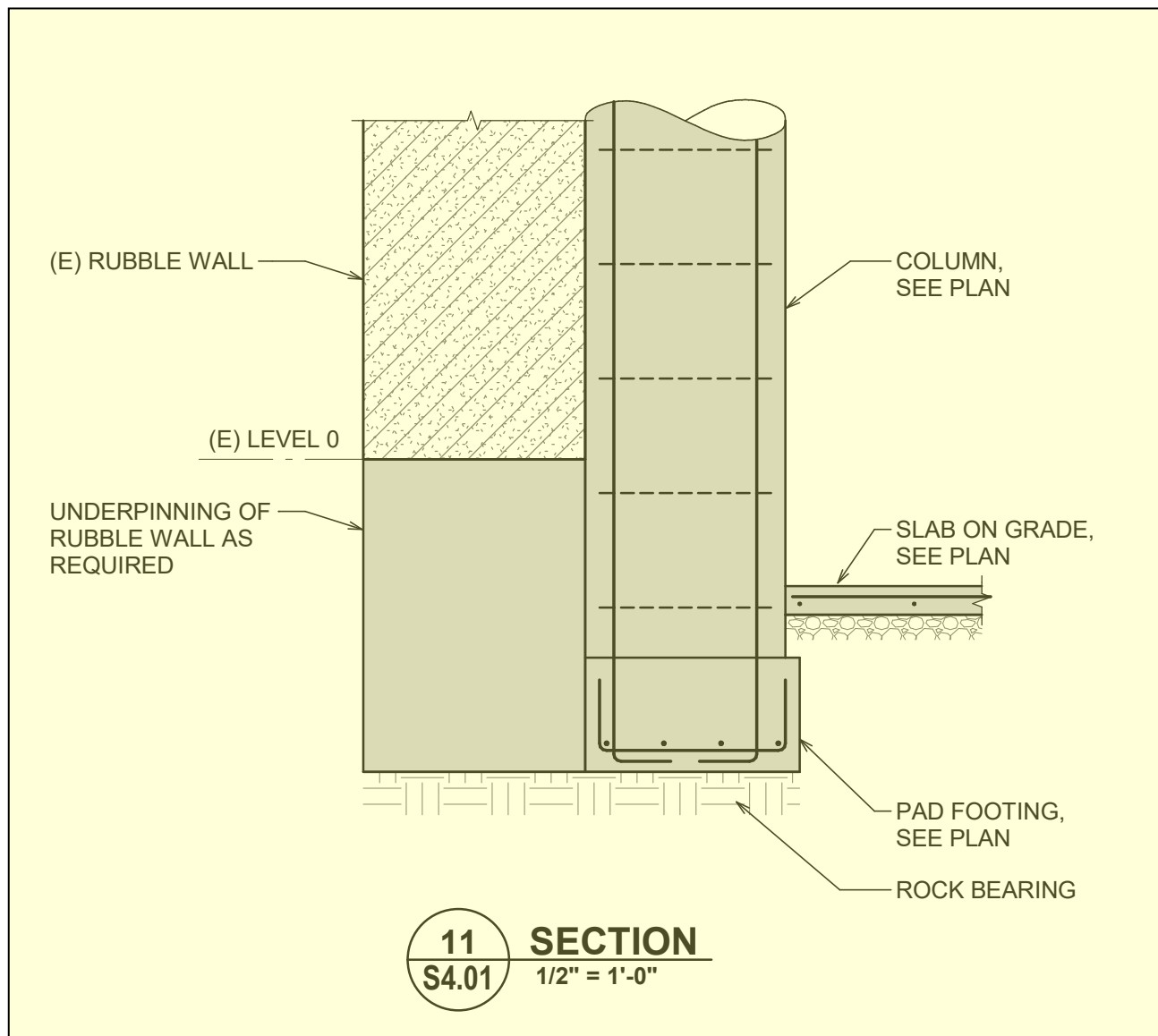
**5 TYPICAL TRENCH DRAIN DETAIL**  
1/2" = 1'-0"



**10 TYPICAL REINFORCING THROUGH SLAB STEPS U.N.O.**  
1/2" = 1'-0"



**9 RETAINING WALL AT CORNER DETAIL**  
1/2" = 1'-0"



**11 SECTION**  
1/2" = 1'-0"



ITEMS HIGHLIGHTED IN RED ARE REQUIRED  
FOR SEISMIC RESTRAINT OF THE HERITAGE  
BUILDINGS

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10	Review set	2023-07-11	AP
9	Building Permit Application Rev 3	2023-04-10	AP
8	Post-Tender Addendum	2023-02-09	AP
7	Addendum No. 3	2022-11-17	AP
6	Addendum No. 2	2022-11-10	AP
5	Issued for Tender	2022-10-14	AP
4	Issued for Building Permit	2022-06-24	AP
3	90% Progress Set	2022-06-02	PM
2	Issued for 60% Review	2022-03-31	PM
1	Issued for 60% Review	2022-01-13	CP
No.	Revision	Date	By

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Seal

EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

1314-1318 Wharf Street, Victoria B.C.

Sheet Title

**SECTIONS AND DETAILS**

Drawn By **MC** Scale **As indicated**

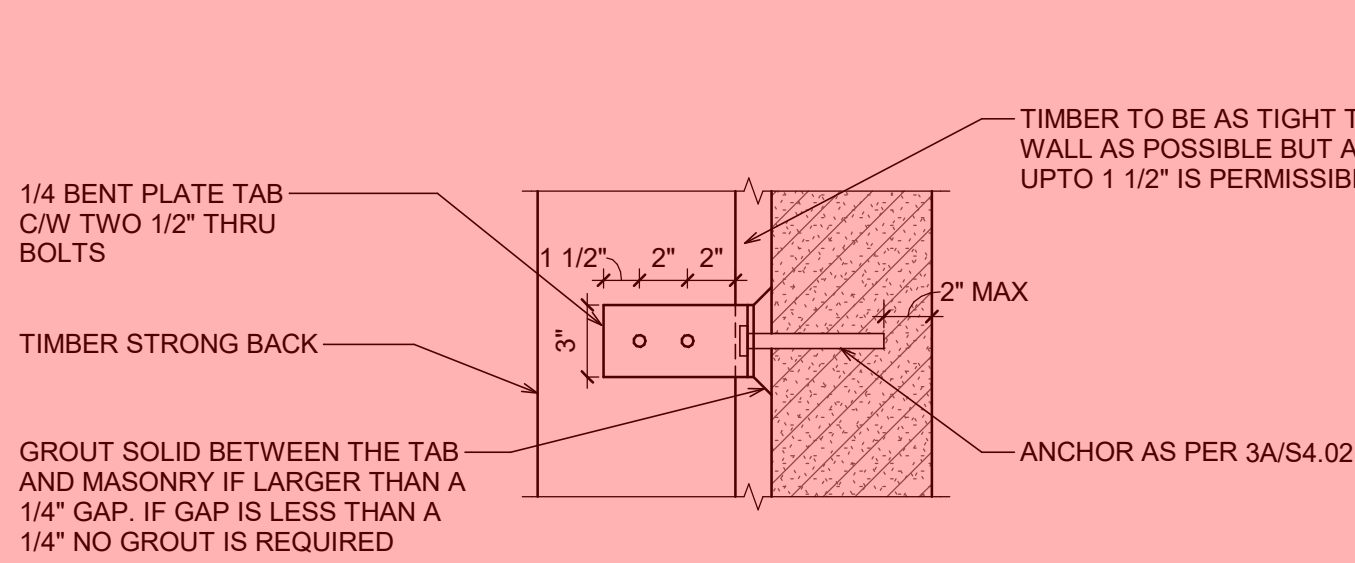
Designed By **AP** Date **2023/08/23**

RJC Project Number **VIC.100479.0006**

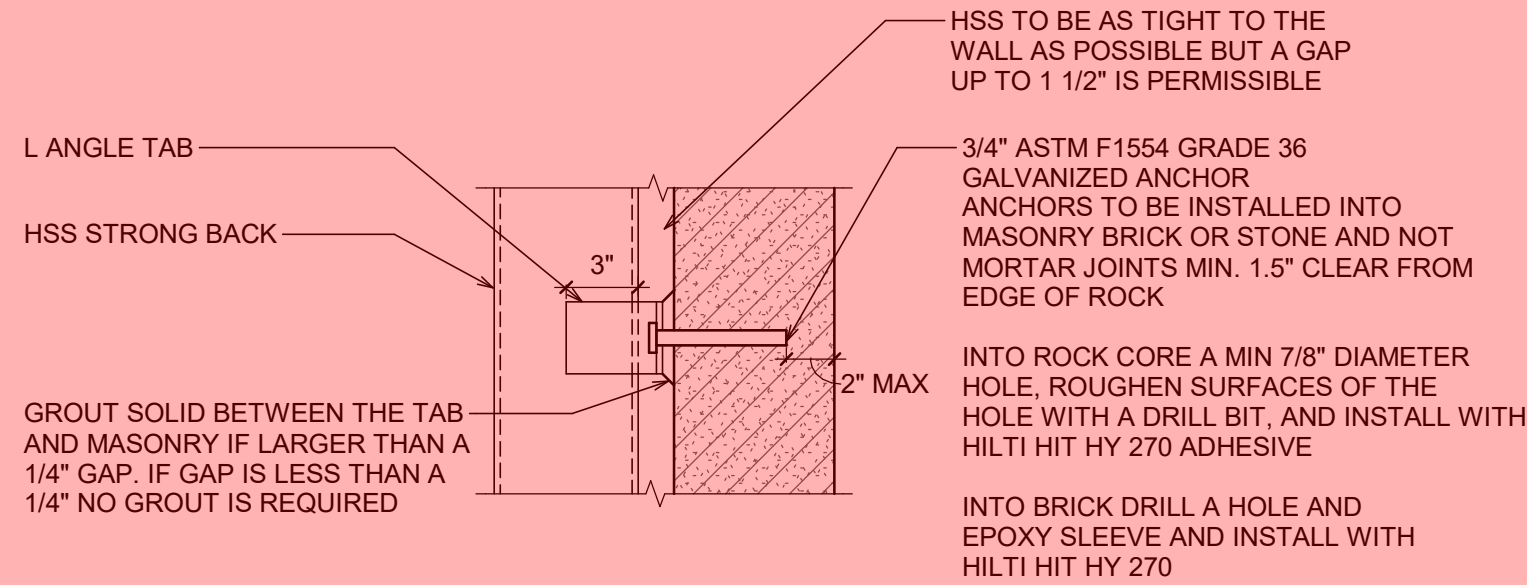
Sheet Number Revision

**S4.02** **11**

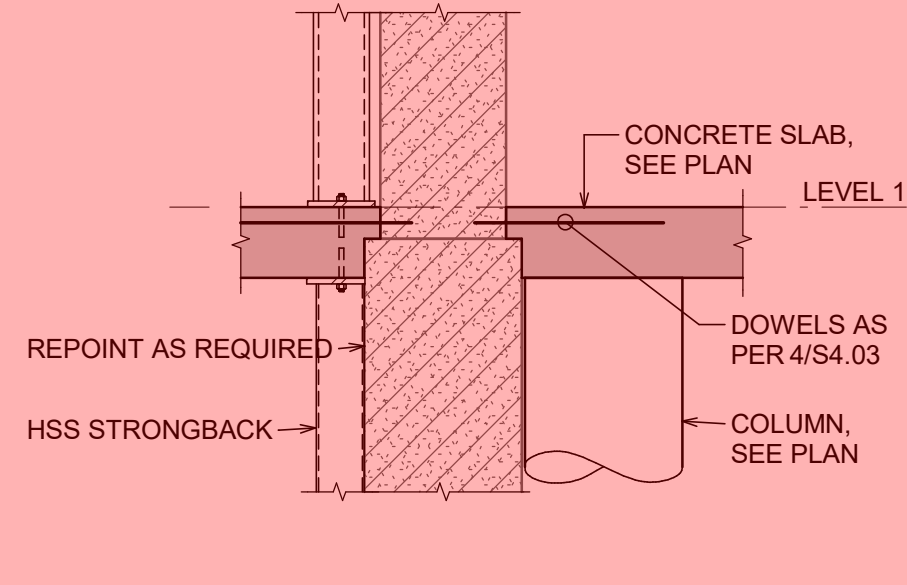
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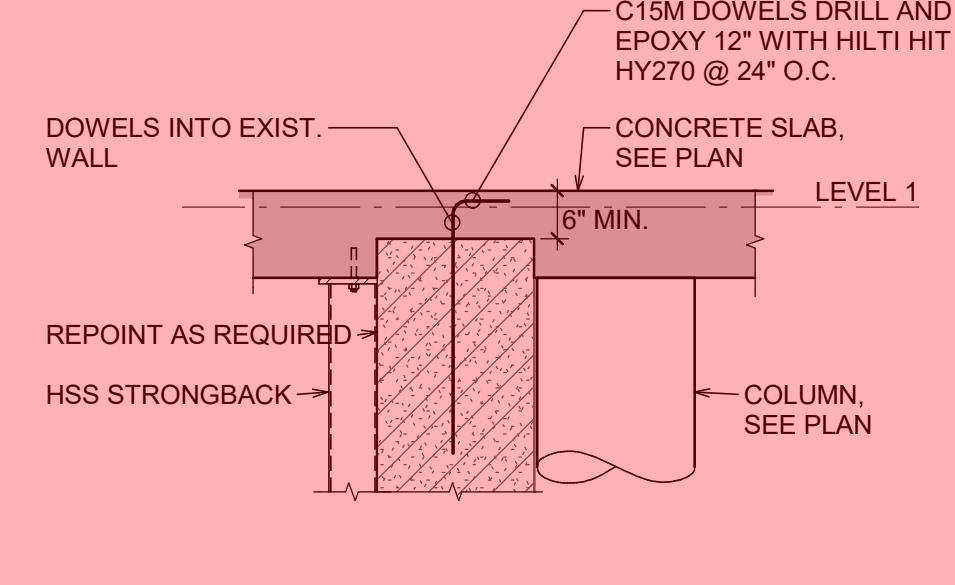
**3B SECTION**  
S4.02 1 1/2" = 1'-0"



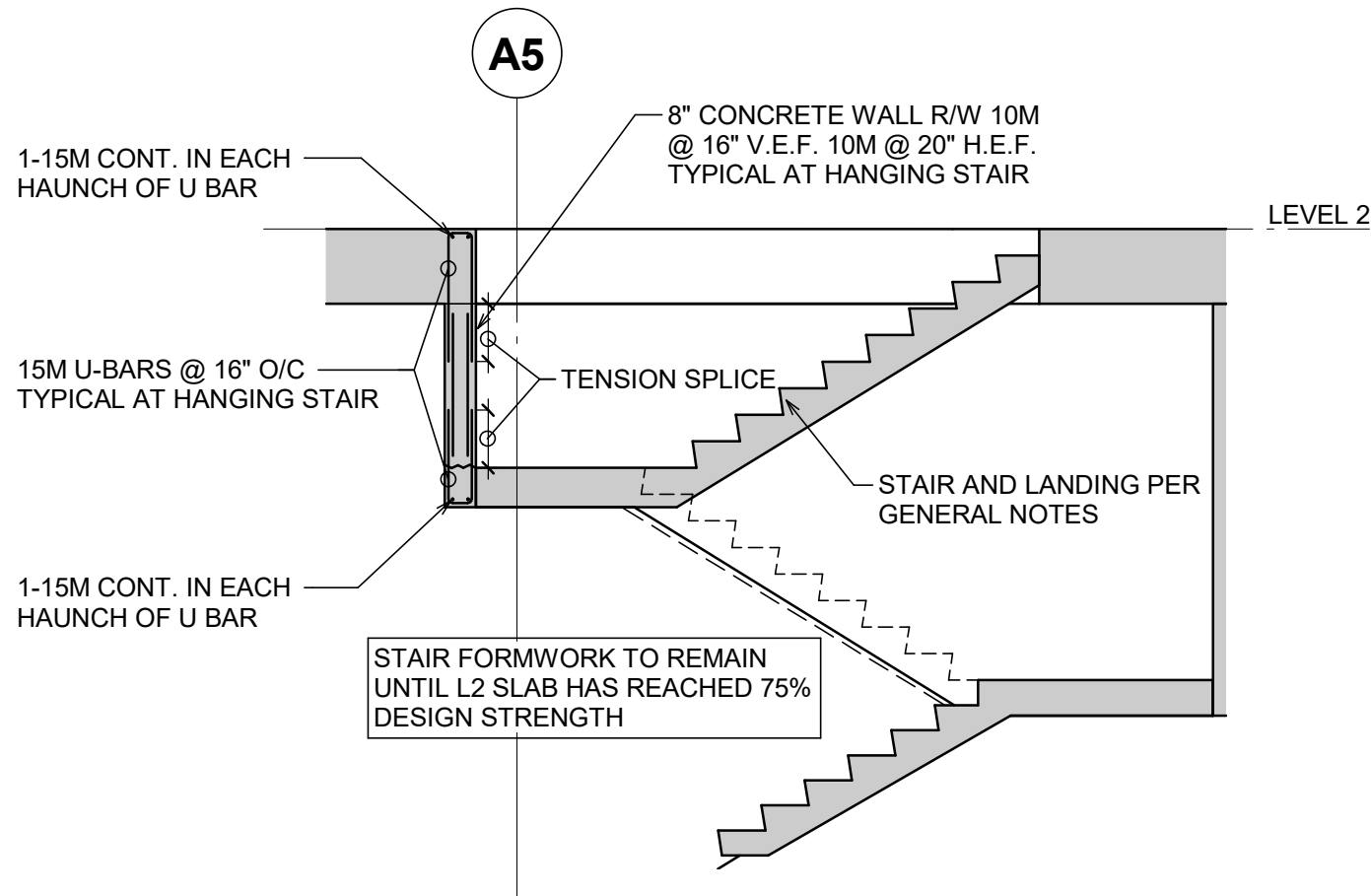
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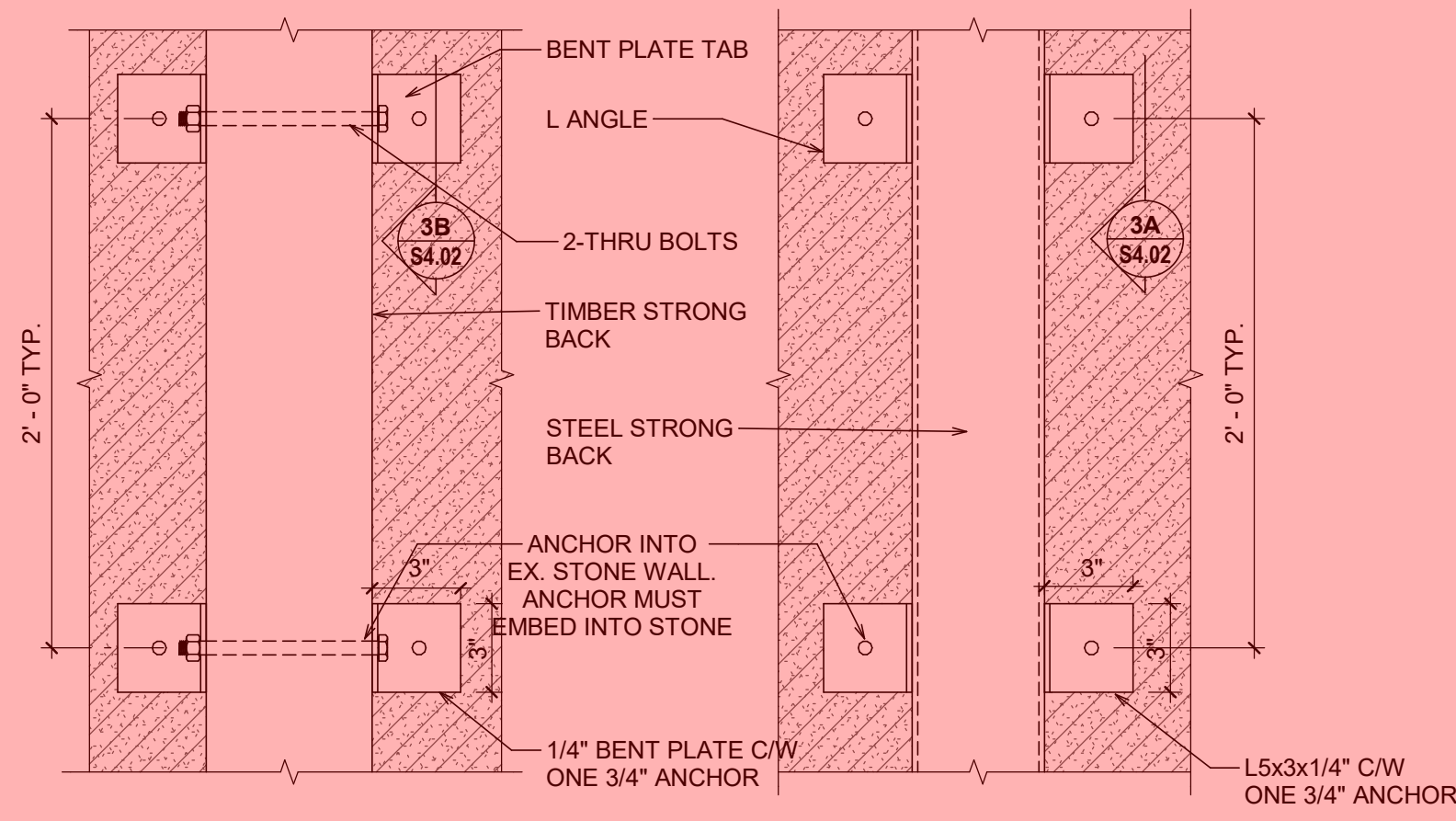
**2 SECTION**  
S4.02 1/2" = 1'-0"



**1 SECTION**  
S4.02 1/2" = 1'-0"



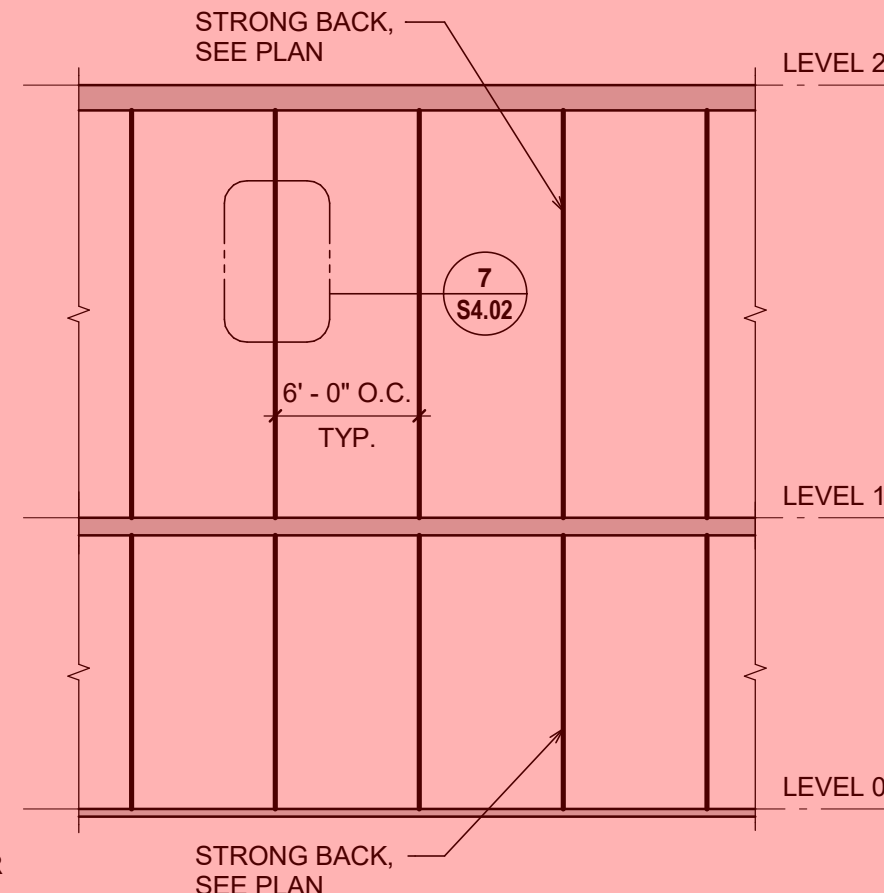
**8 SECTION**  
S4.02 1/4" = 1'-0"



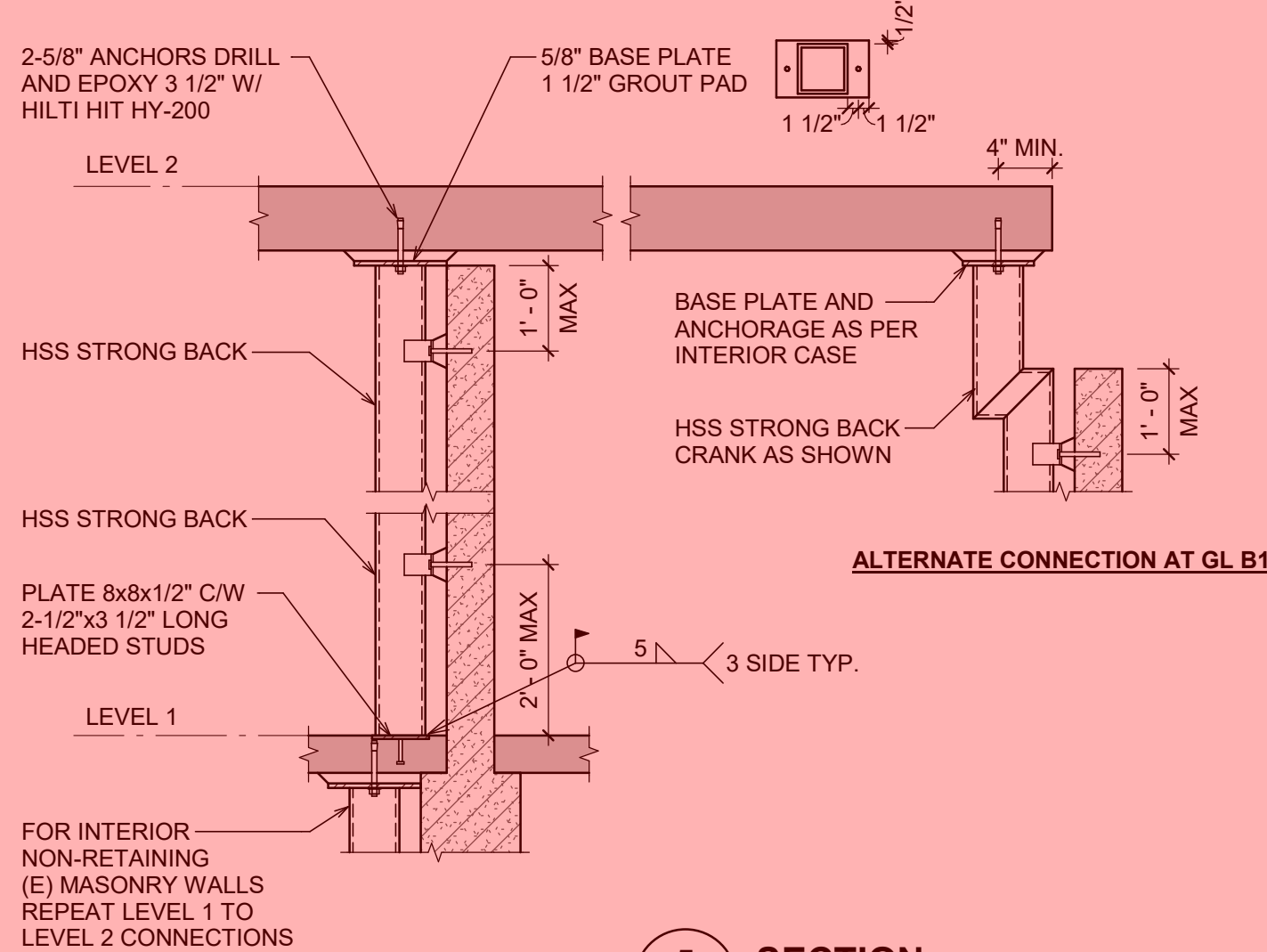
**TIMBER STRONGBACK**

**ALT: STEEL STRONGBACK**

**7 STRONG BACK DETAIL**  
S4.02 1 1/2" = 1'-0"

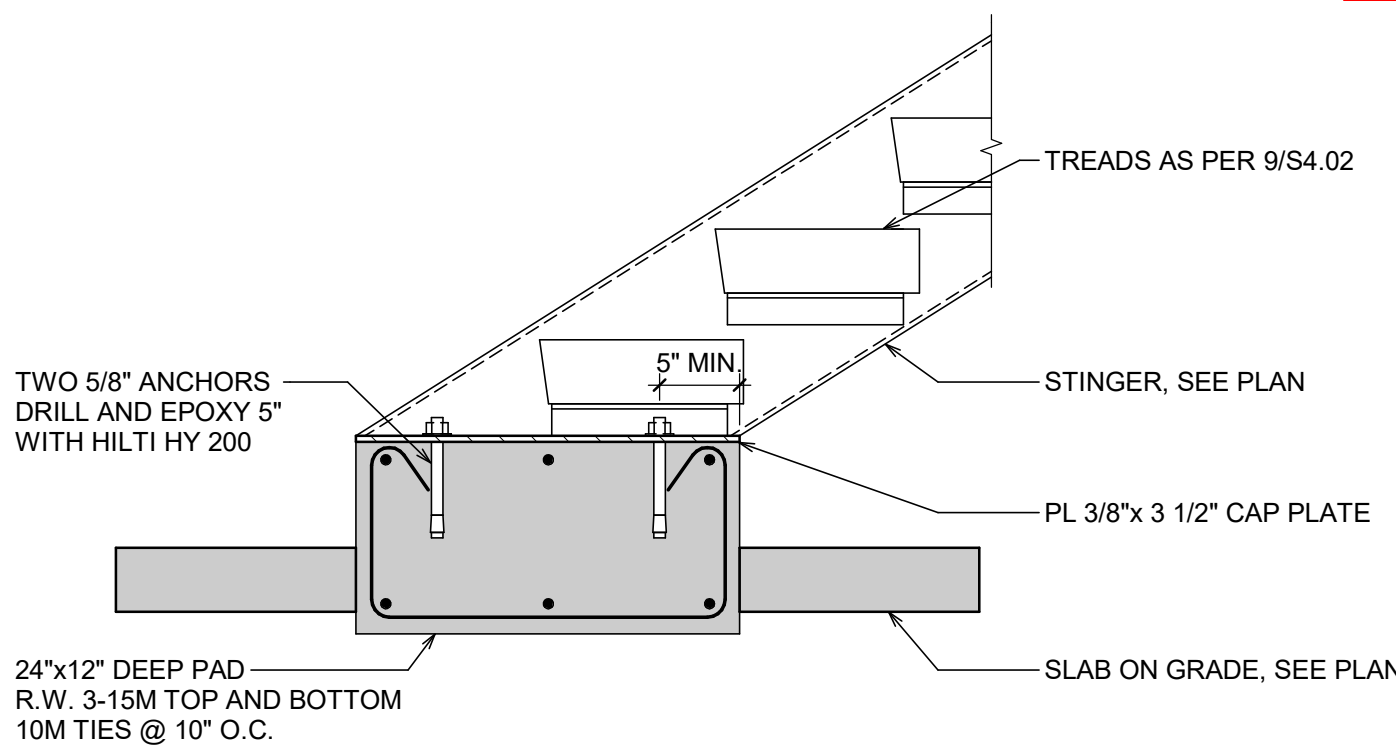


**6 TYP. ELEVATION**  
S4.02 1/8" = 1'-0"

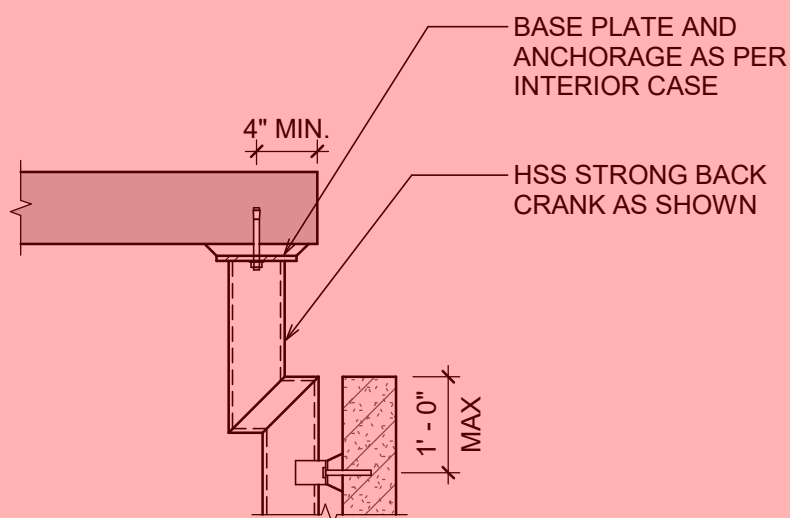


**ALTERNATE CONNECTION AT GL B1**

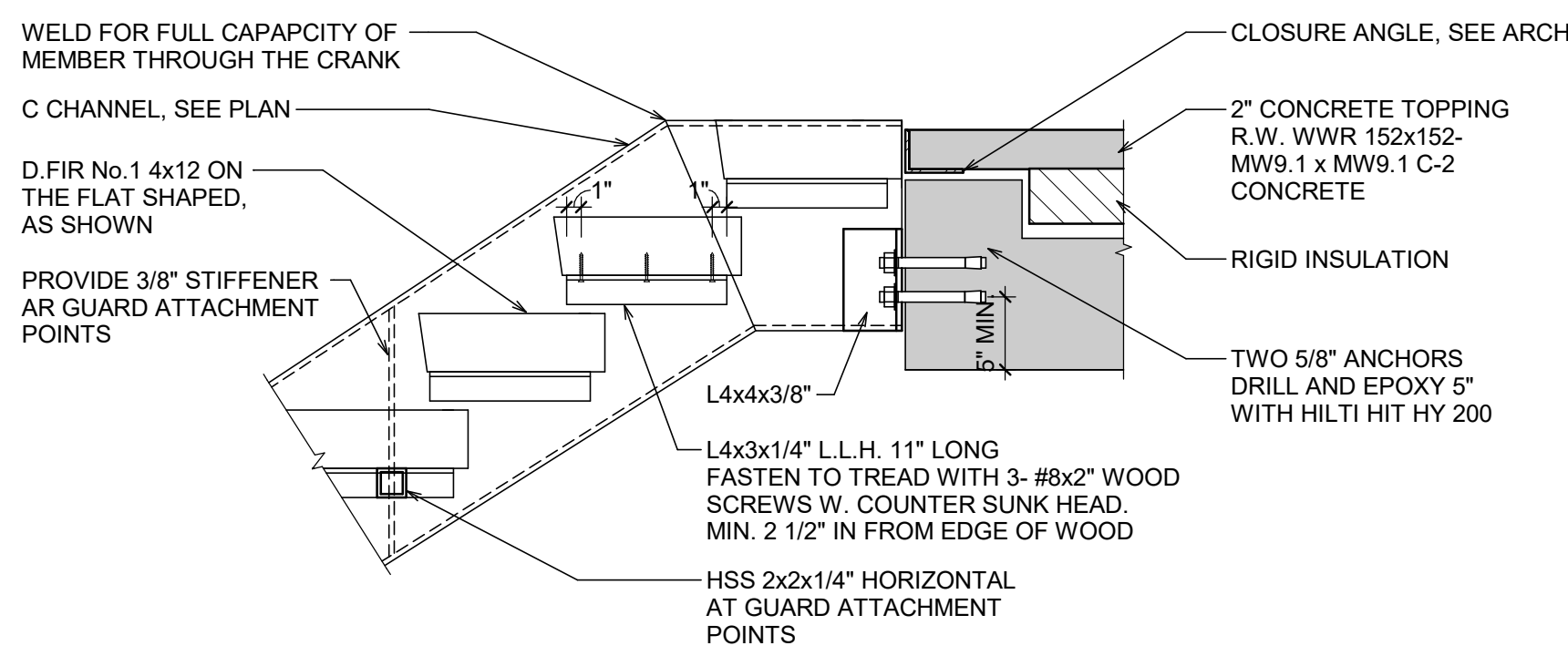
**5 SECTION**  
S4.02 1/2" = 1'-0"



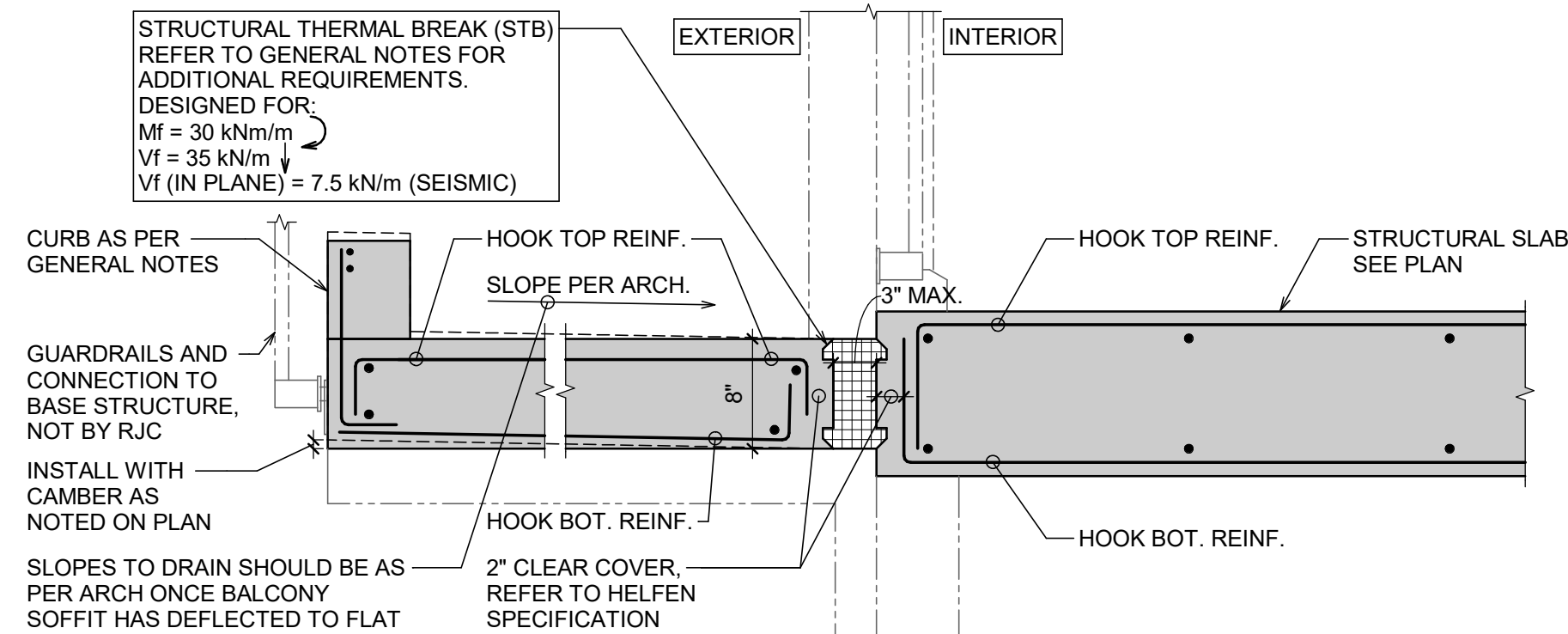
**11 BOTTOM OF STAIR SUPPORTED ON CONCRETE SLAB**  
S4.02 1" = 1'-0"



**10 ALTERNATE CONNECTION AT GL B1**  
S4.02 1/2" = 1'-0"



**9 TOP OF STAIR SUPPORTED AT EDGE OF A CONCRETE SLAB**  
S4.02 1" = 1'-0"



**12 SECTION**  
S4.02 1" = 1'-0"

**4 SECTION NOT USED**  
S4.02 1" = 1'-0"

**13 SECTION NOT USED**  
S4.02 1" = 1'-0"



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2	Addendum No. 2	2022-11-10	AP
1	Issued for Tender	2022-10-14	AP

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Seal

EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

**1314-1318 Wharf Street, Victoria B.C.**

Sheet Title

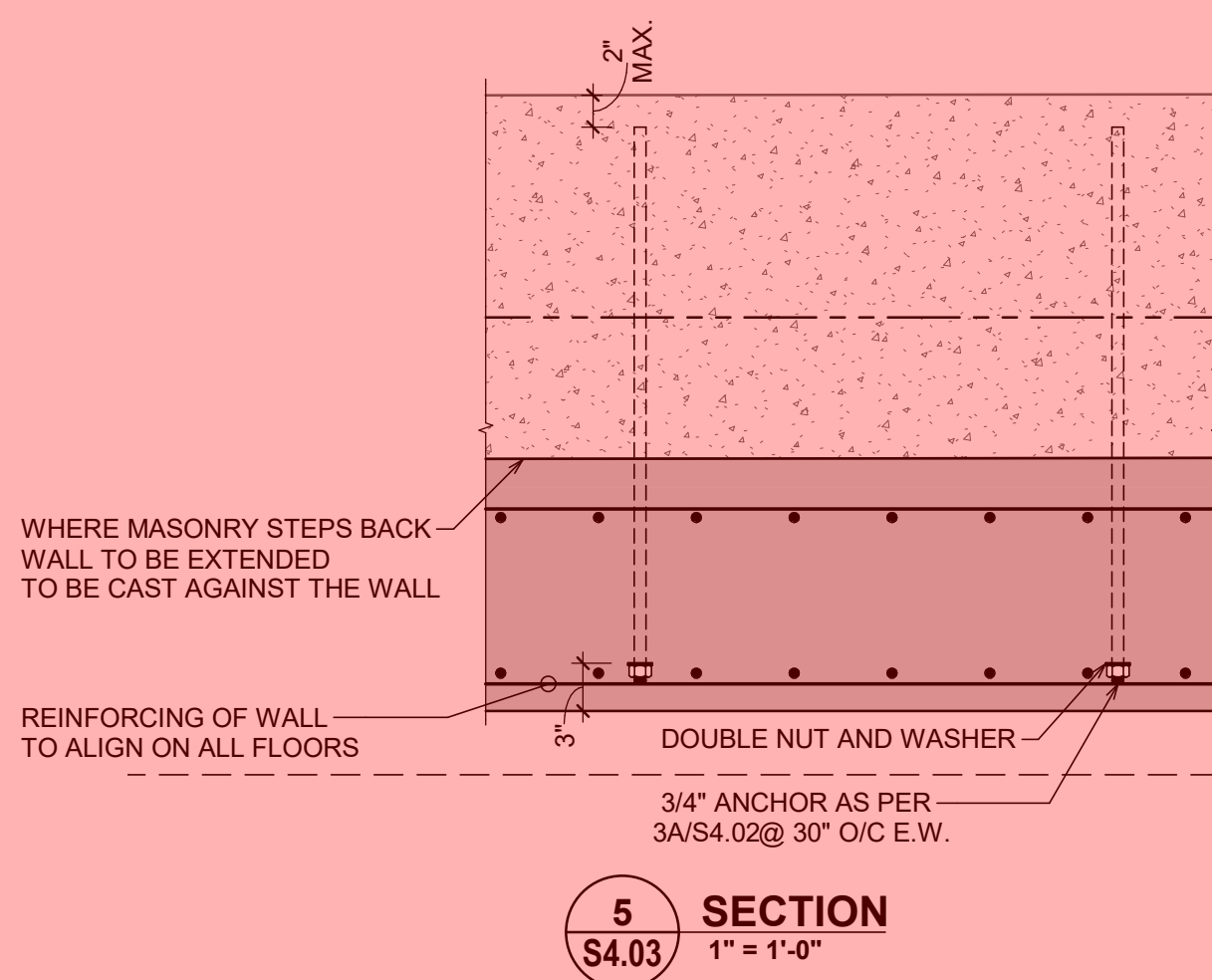
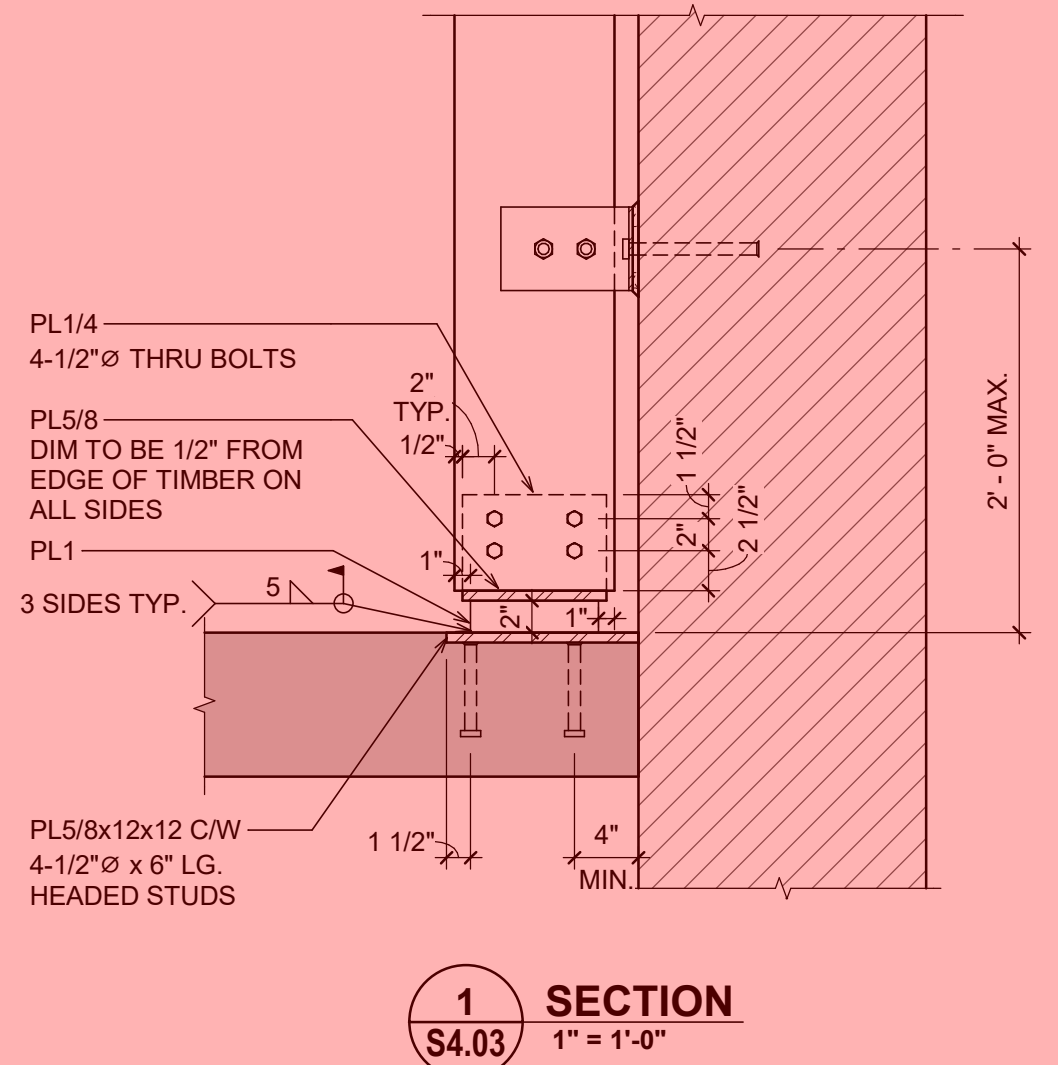
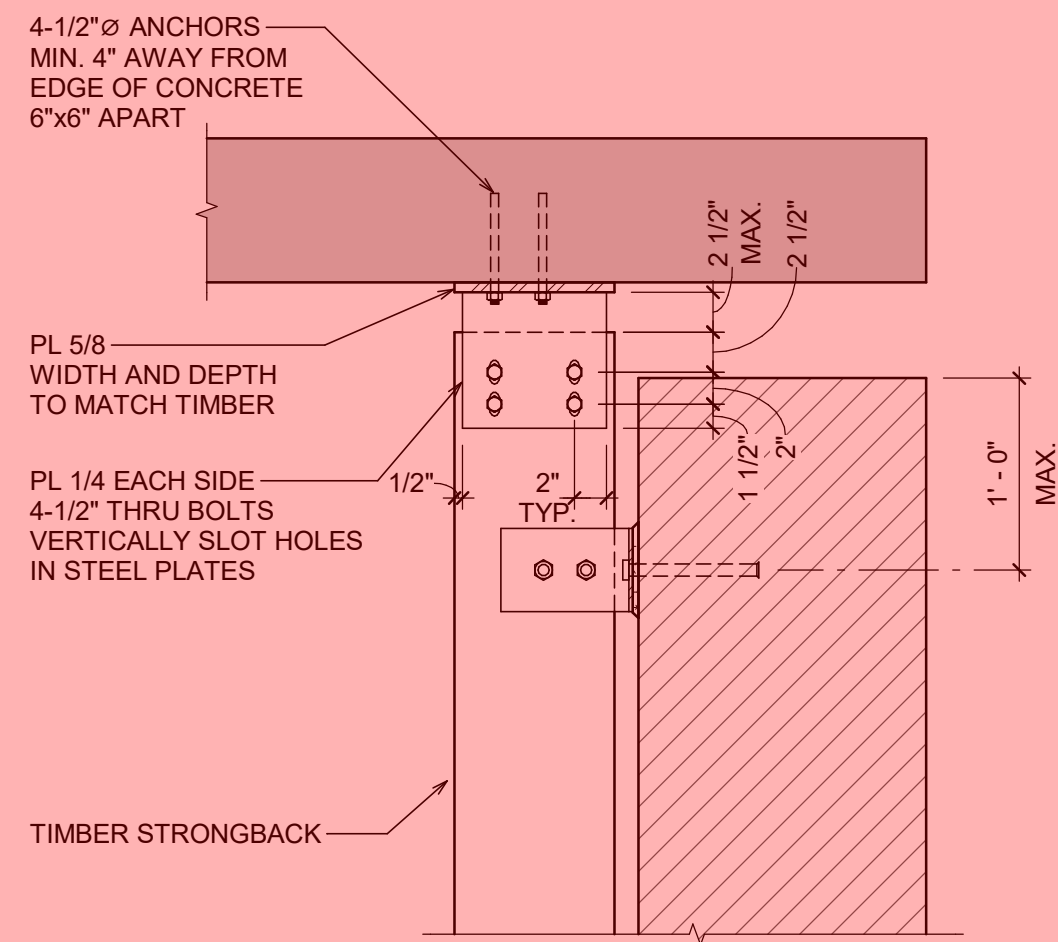
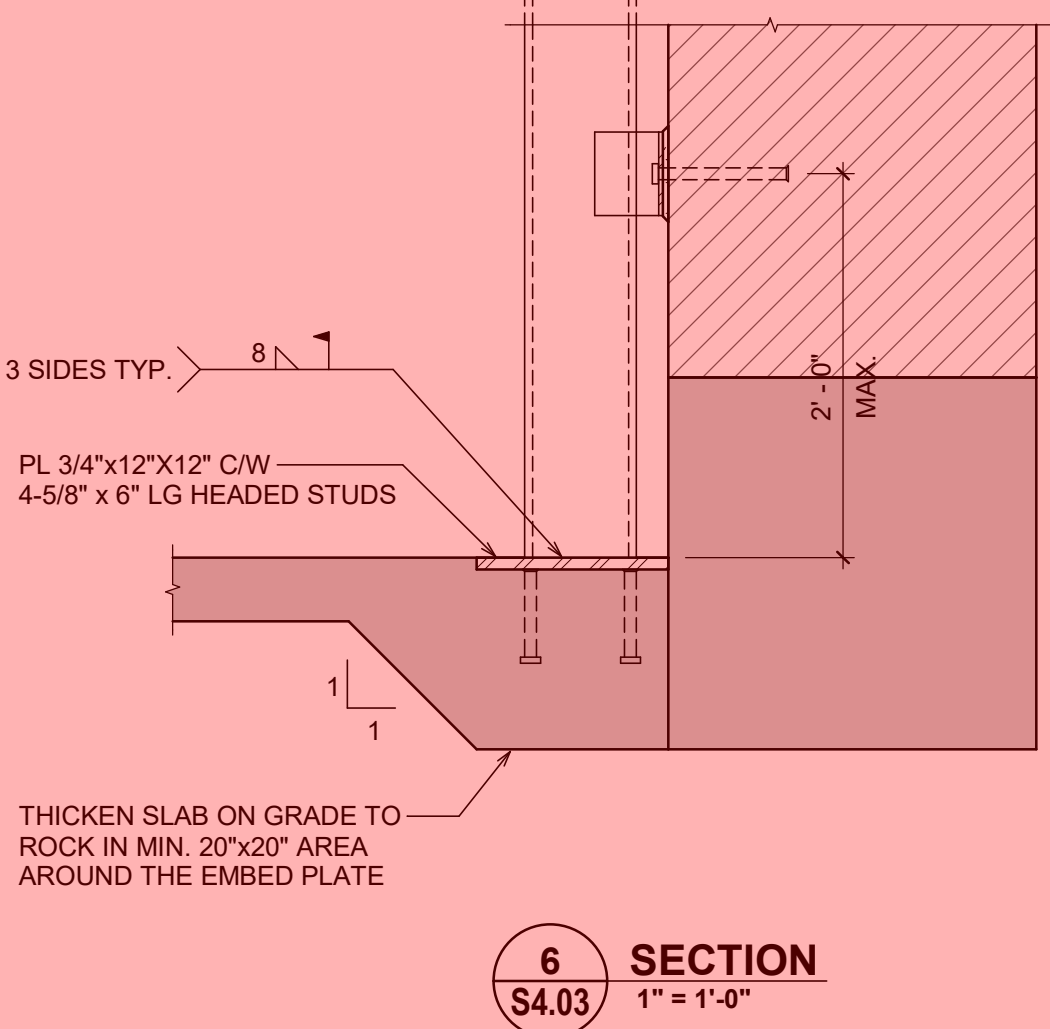
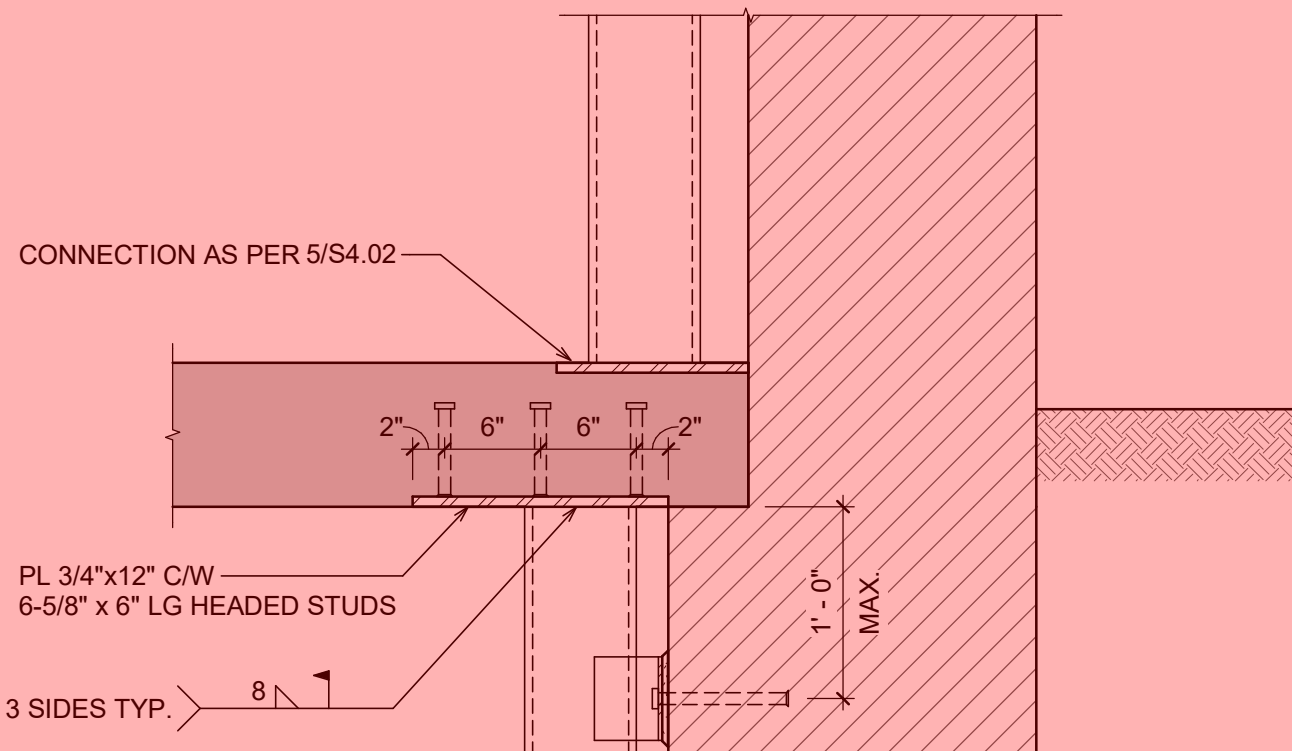
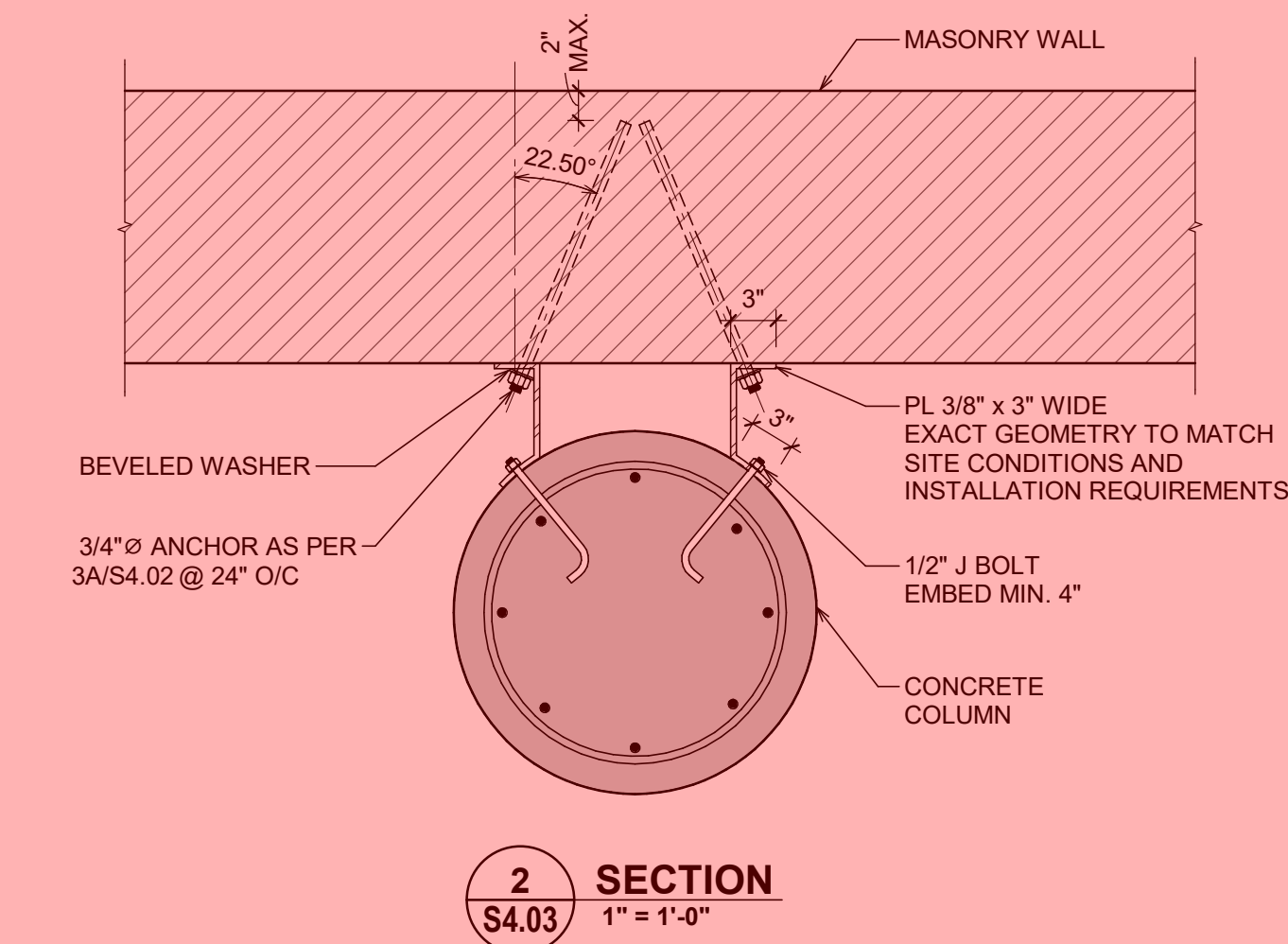
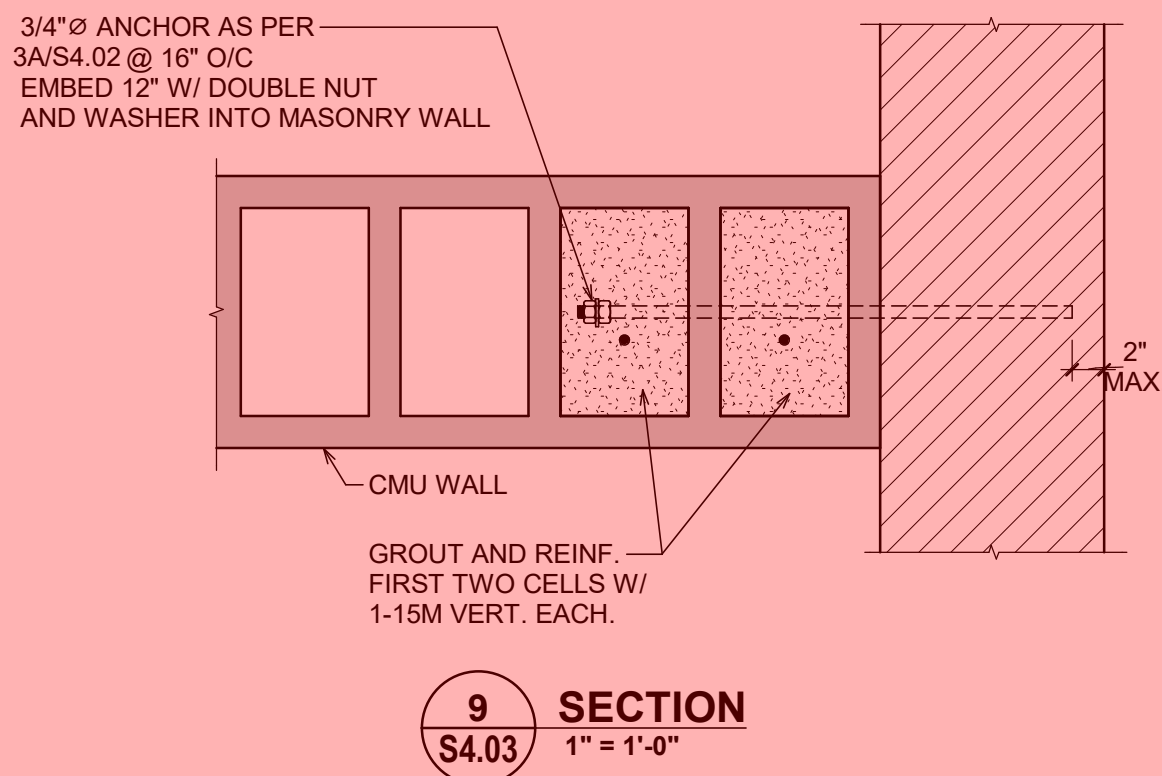
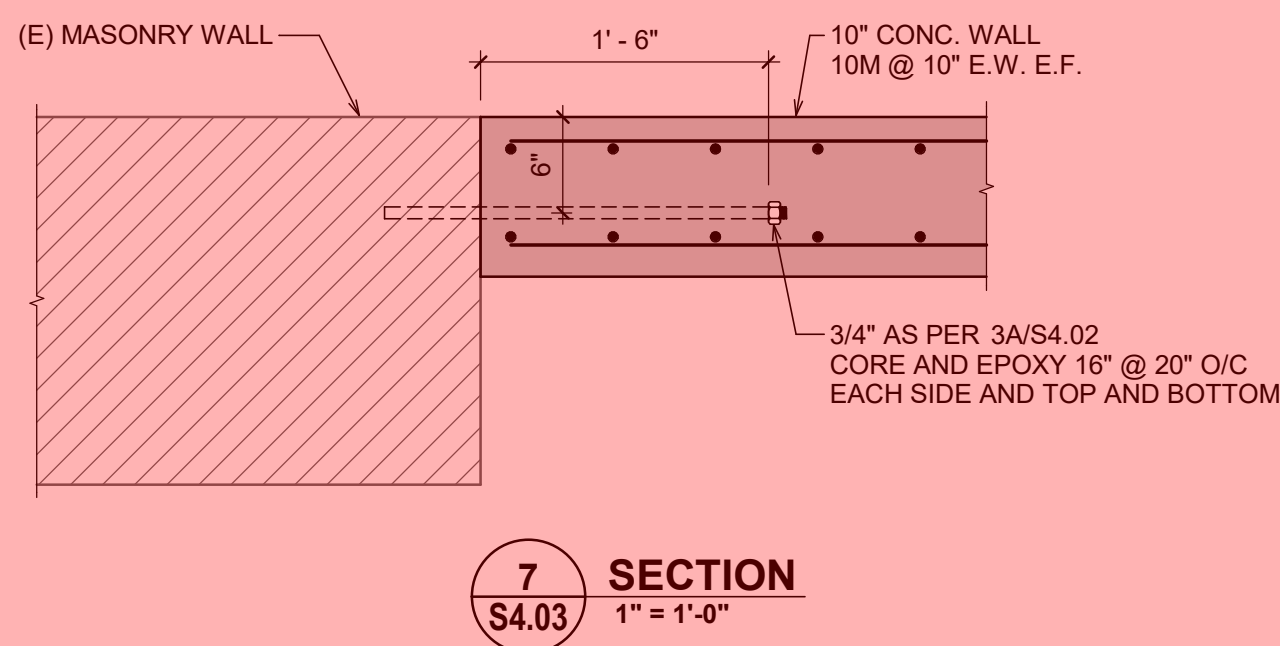
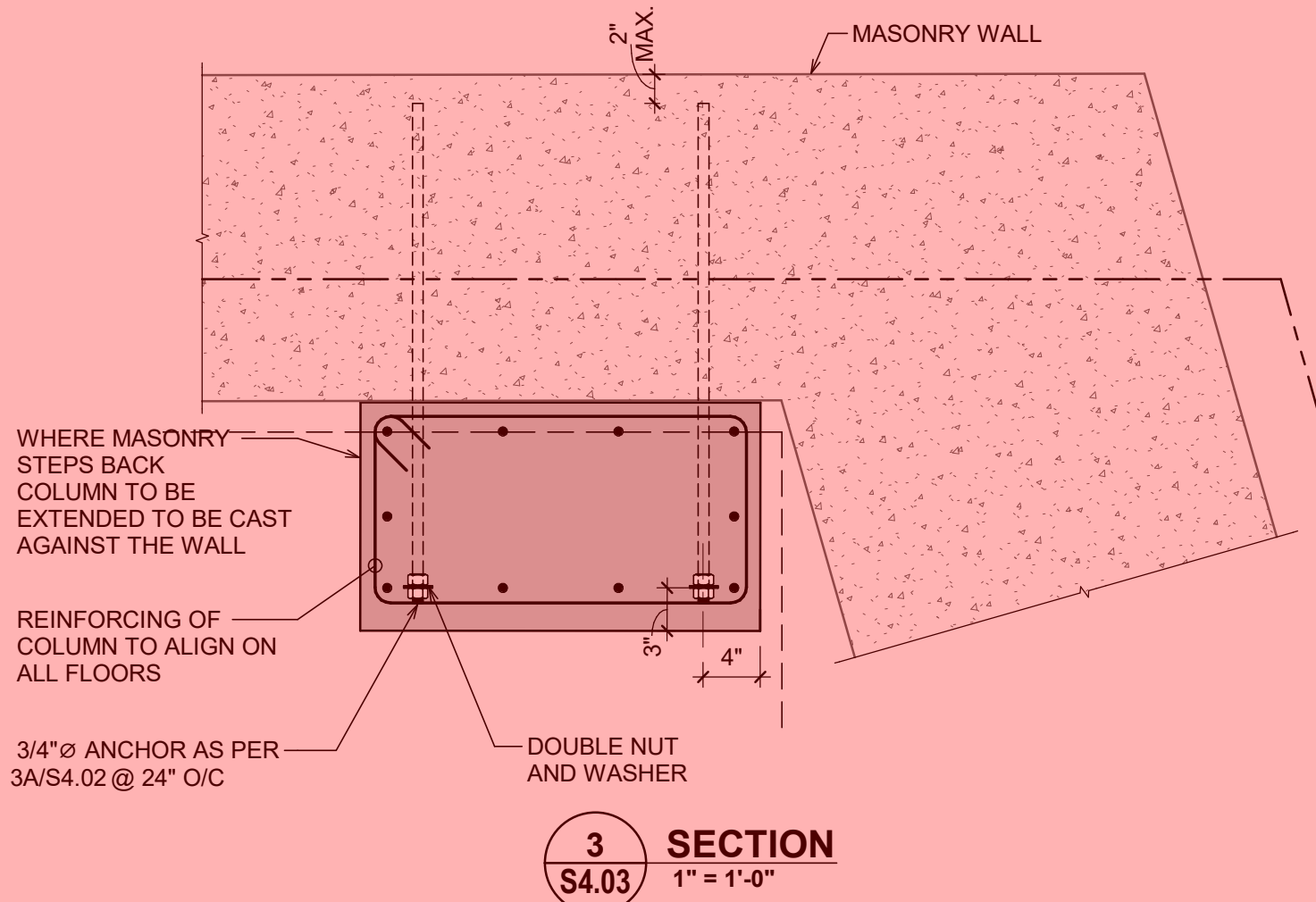
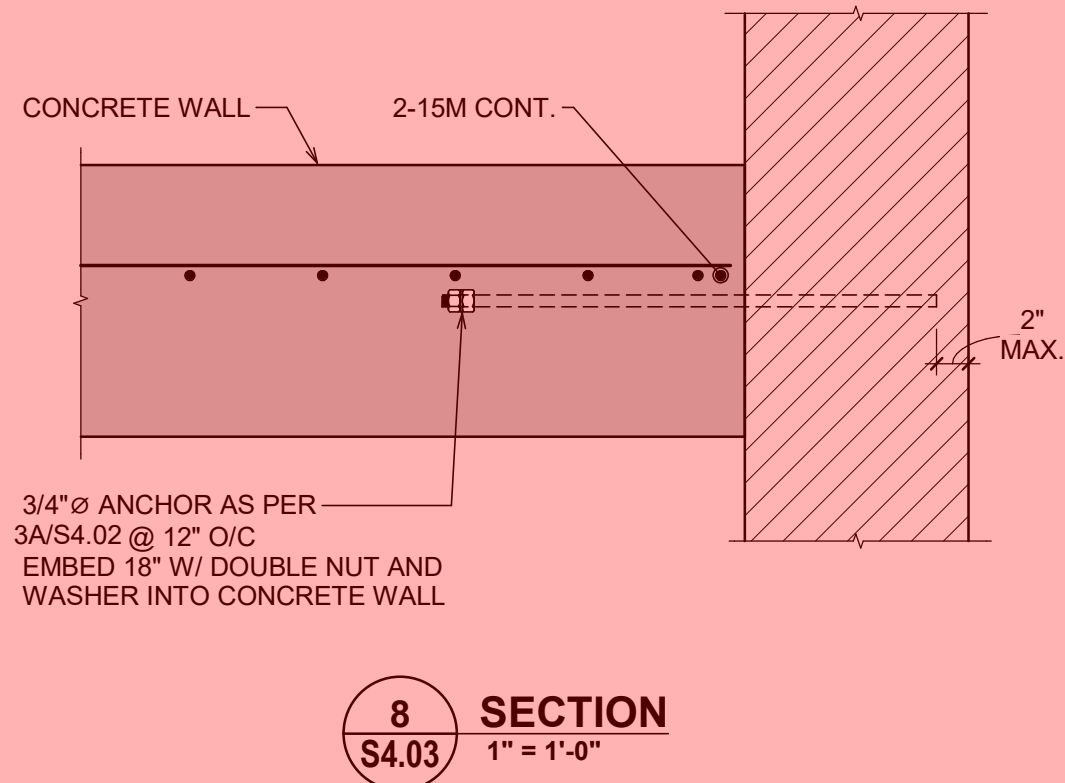
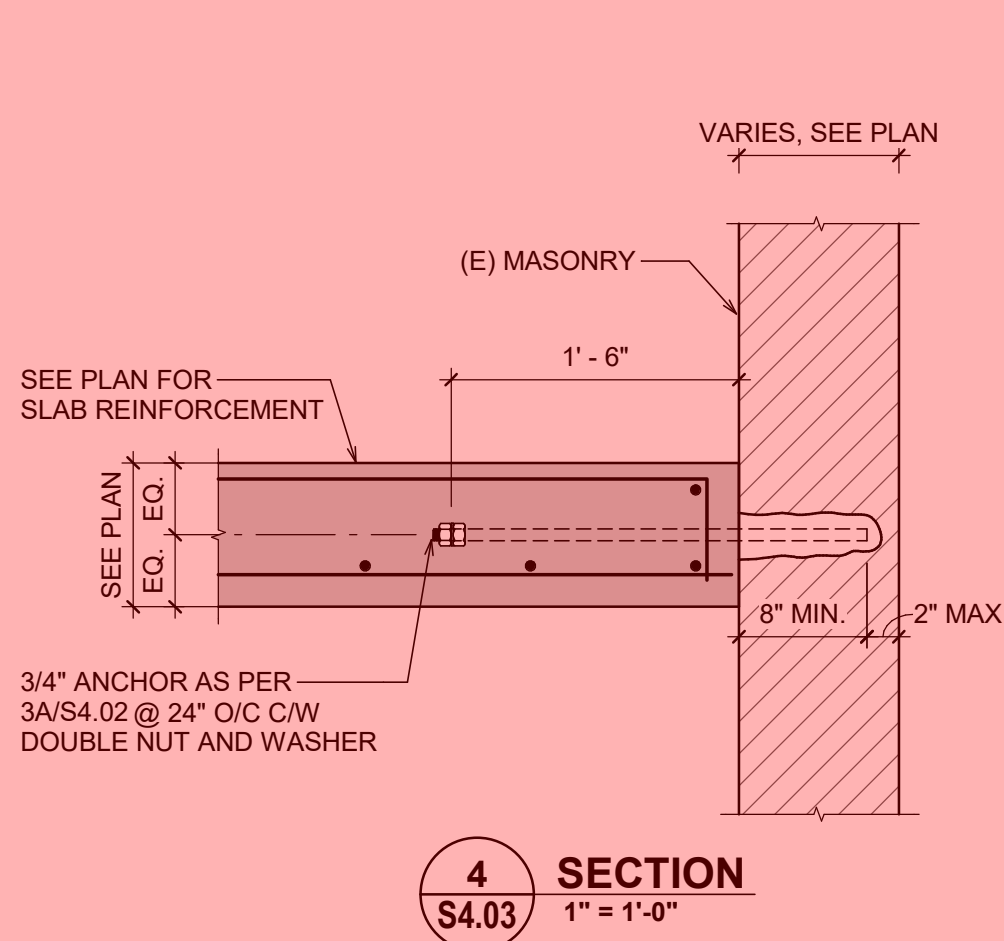
**SECTIONS AND DETAILS**

Drawn By	MC	Scale	1" = 1'-0"
Designed By	AP	Date	2023/08/23
RJC Project Number	VIC.100479.0006		

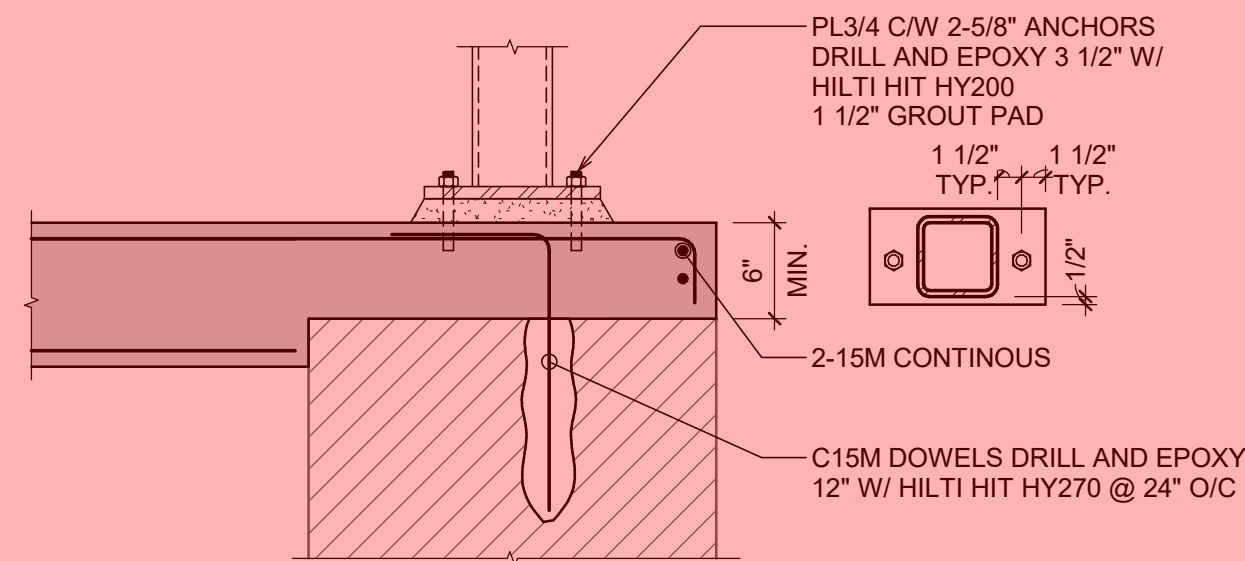
Sheet Number	Revision
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**S4.03** **7**

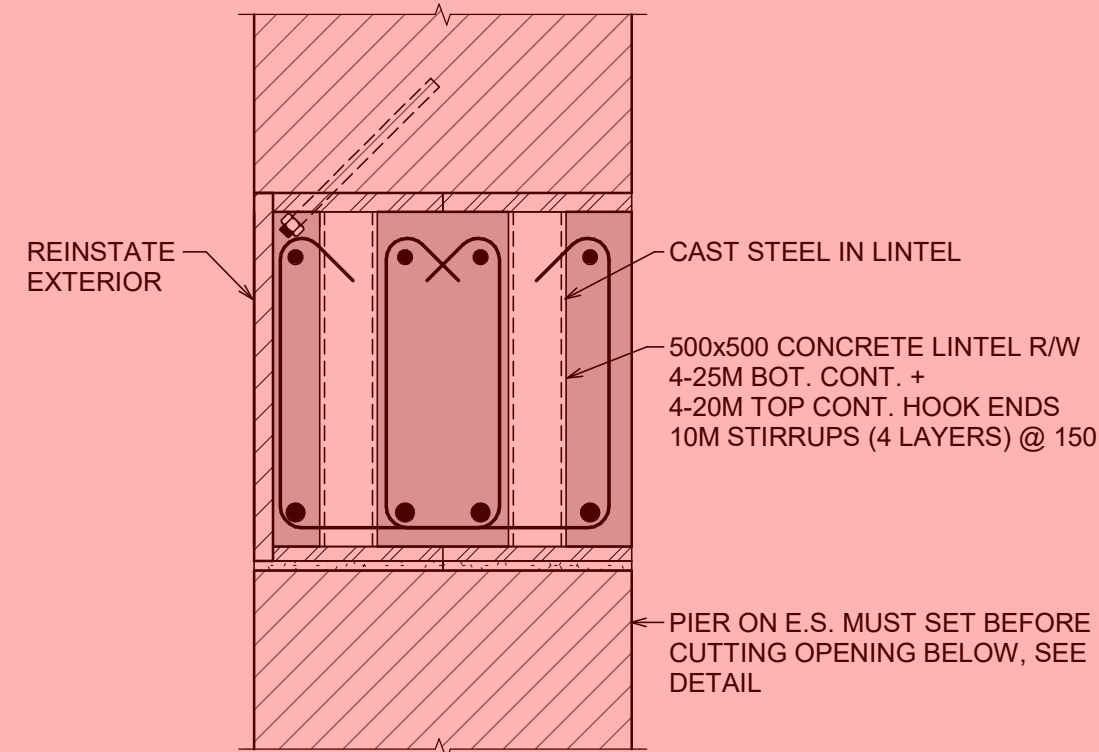
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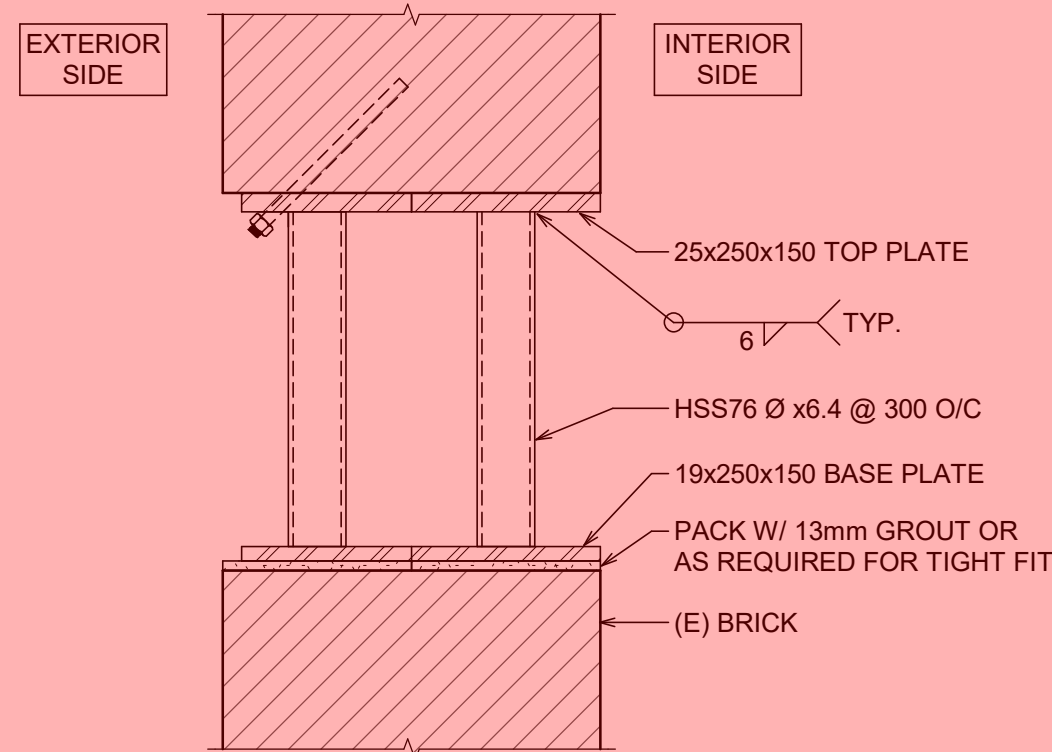




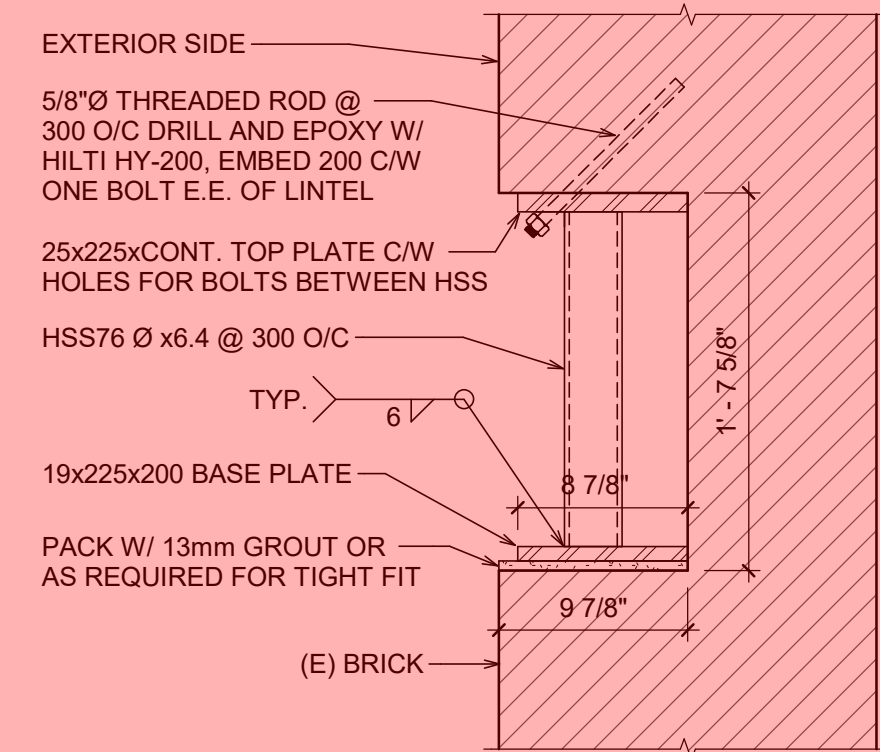
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**S4.04** SECTION  
1" = 1'-0"



**STEP 3**

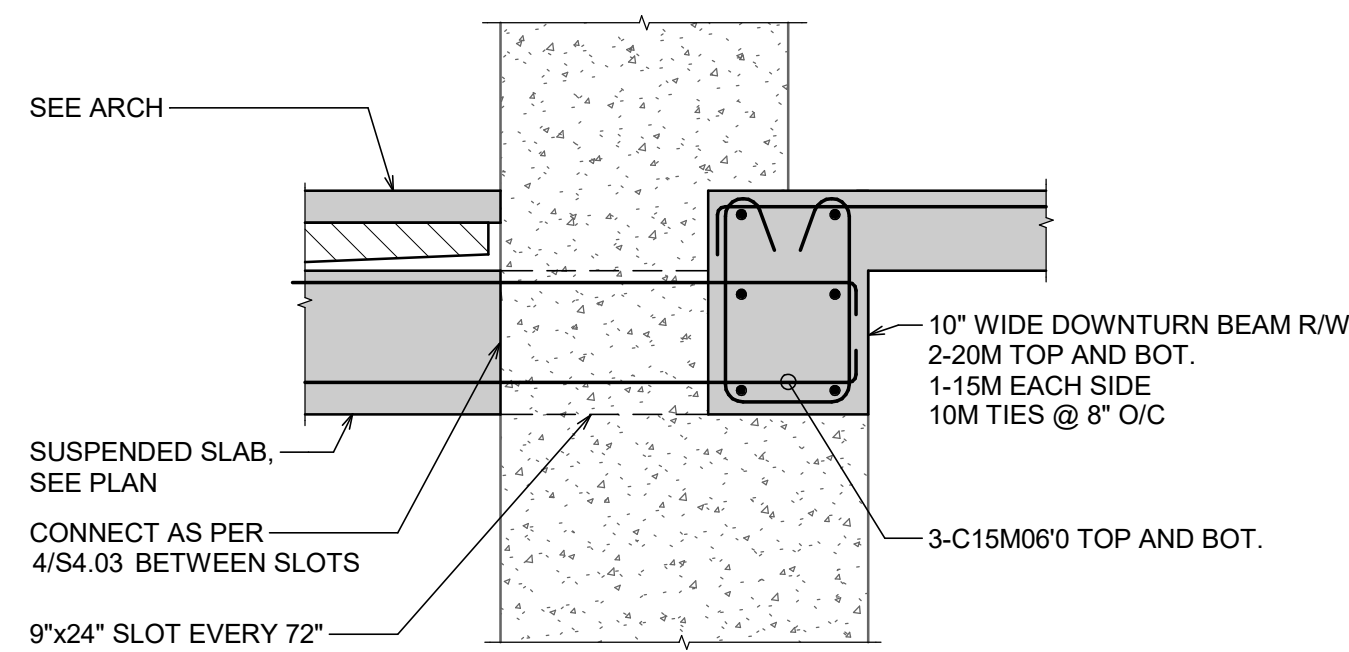


**STEP 2**

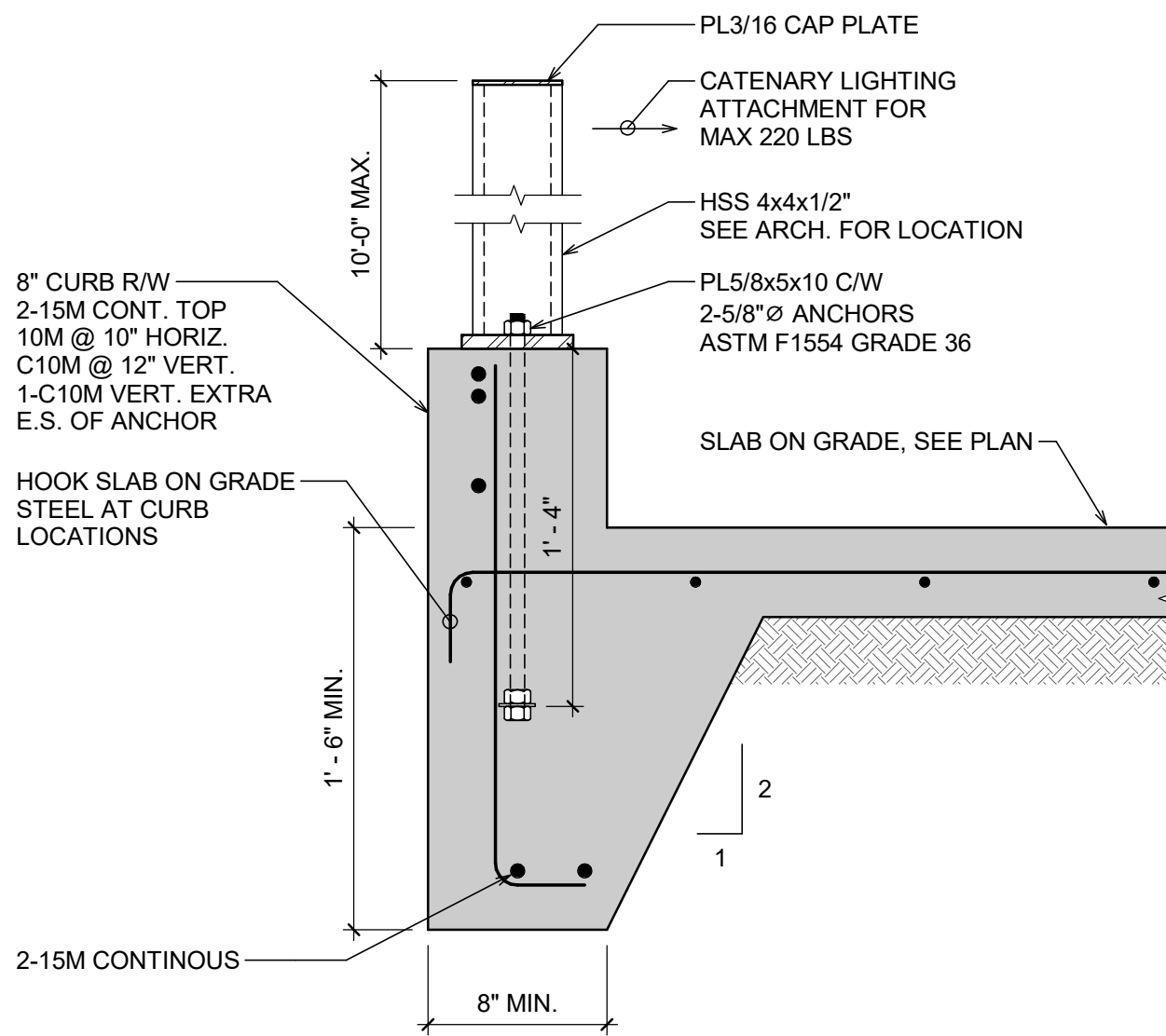


**STEP 1**

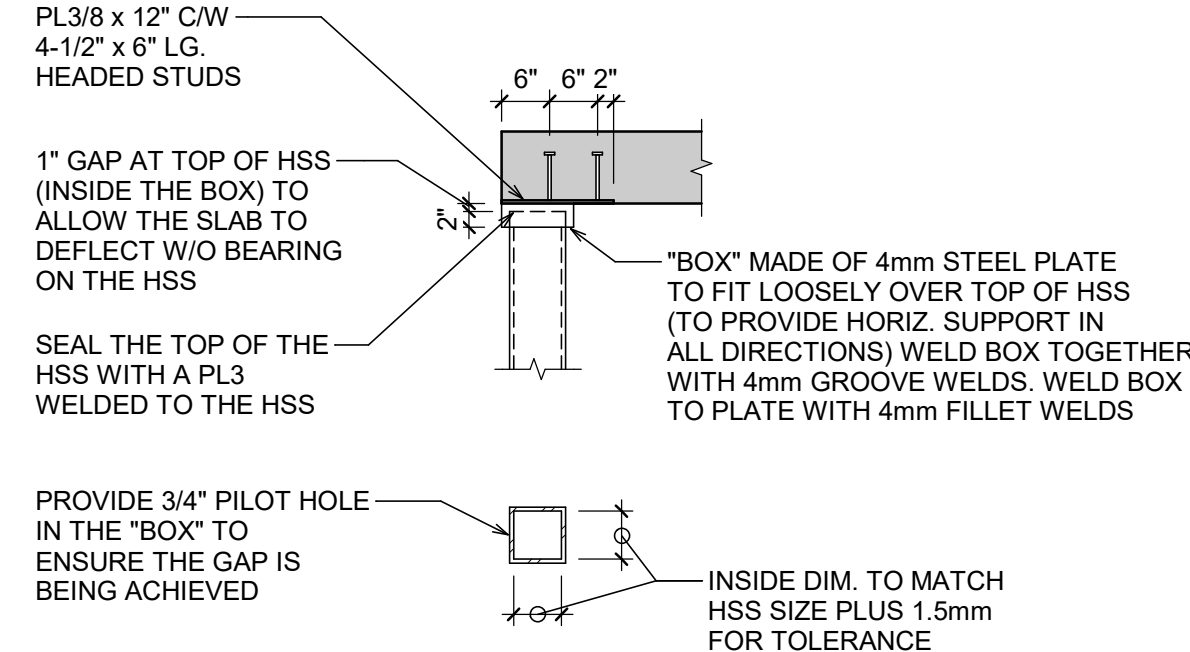
**1**  
**S4.04** CONCRETE LINTEL CONSTRUCTION DETAIL  
1 : 10



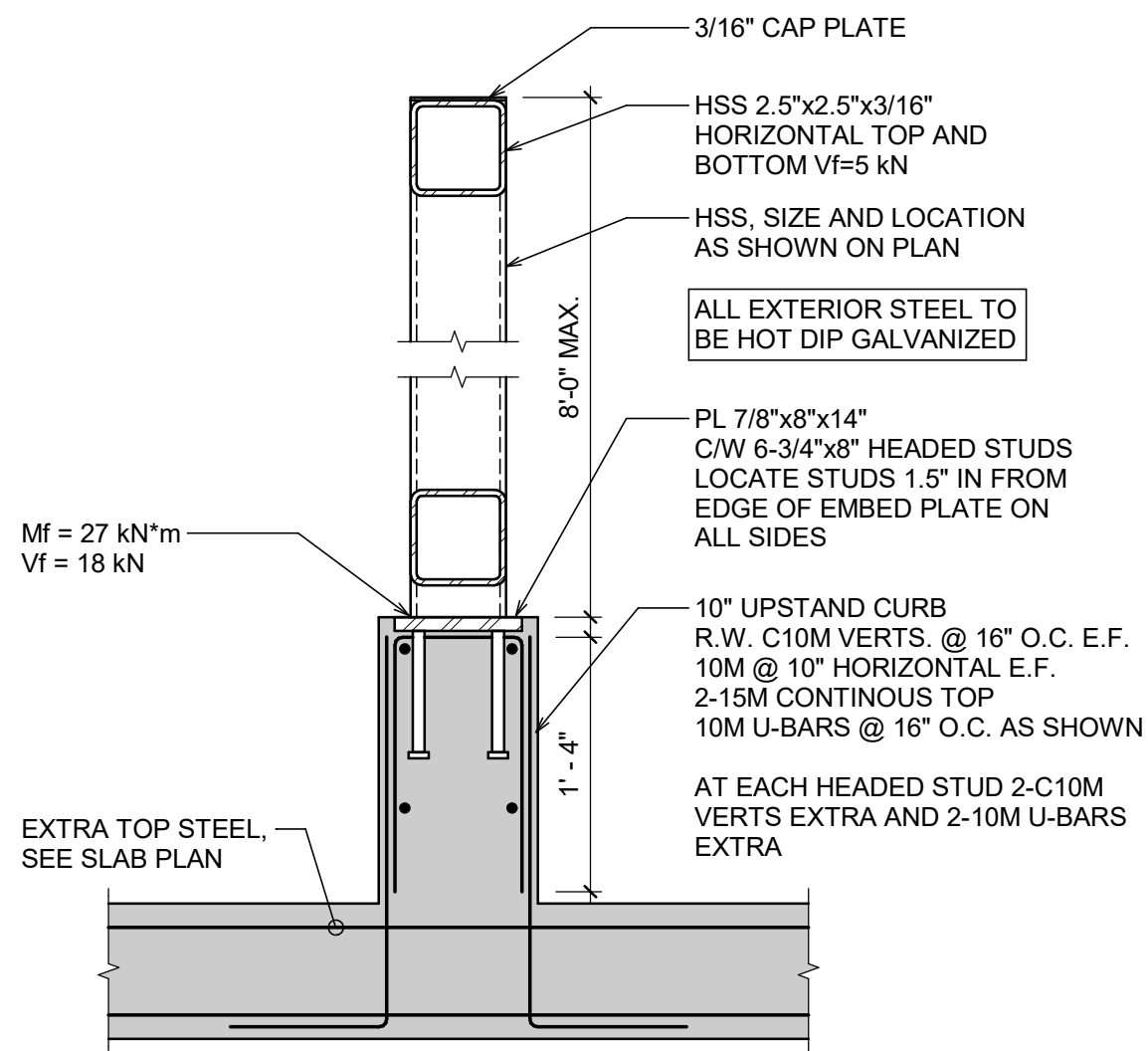
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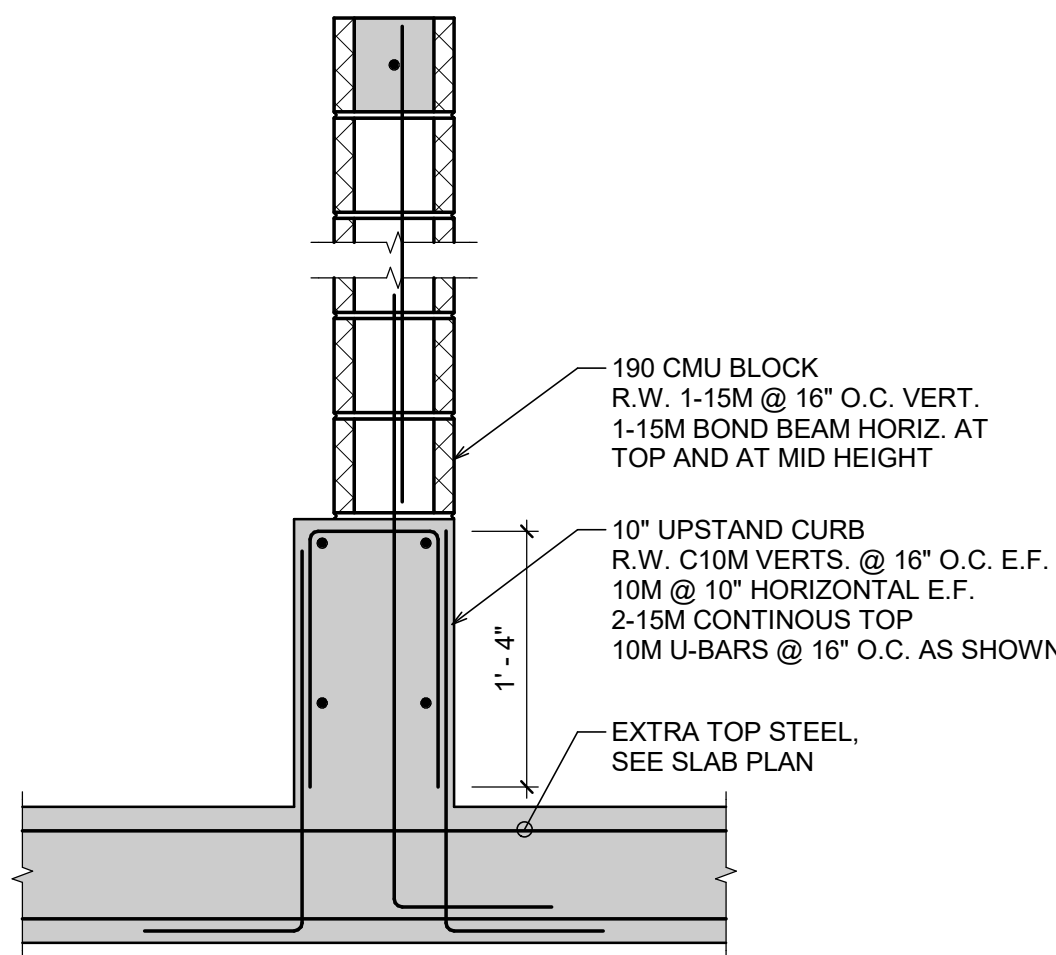
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**S4.04** SECTION  
1 1/2" = 1'-0"



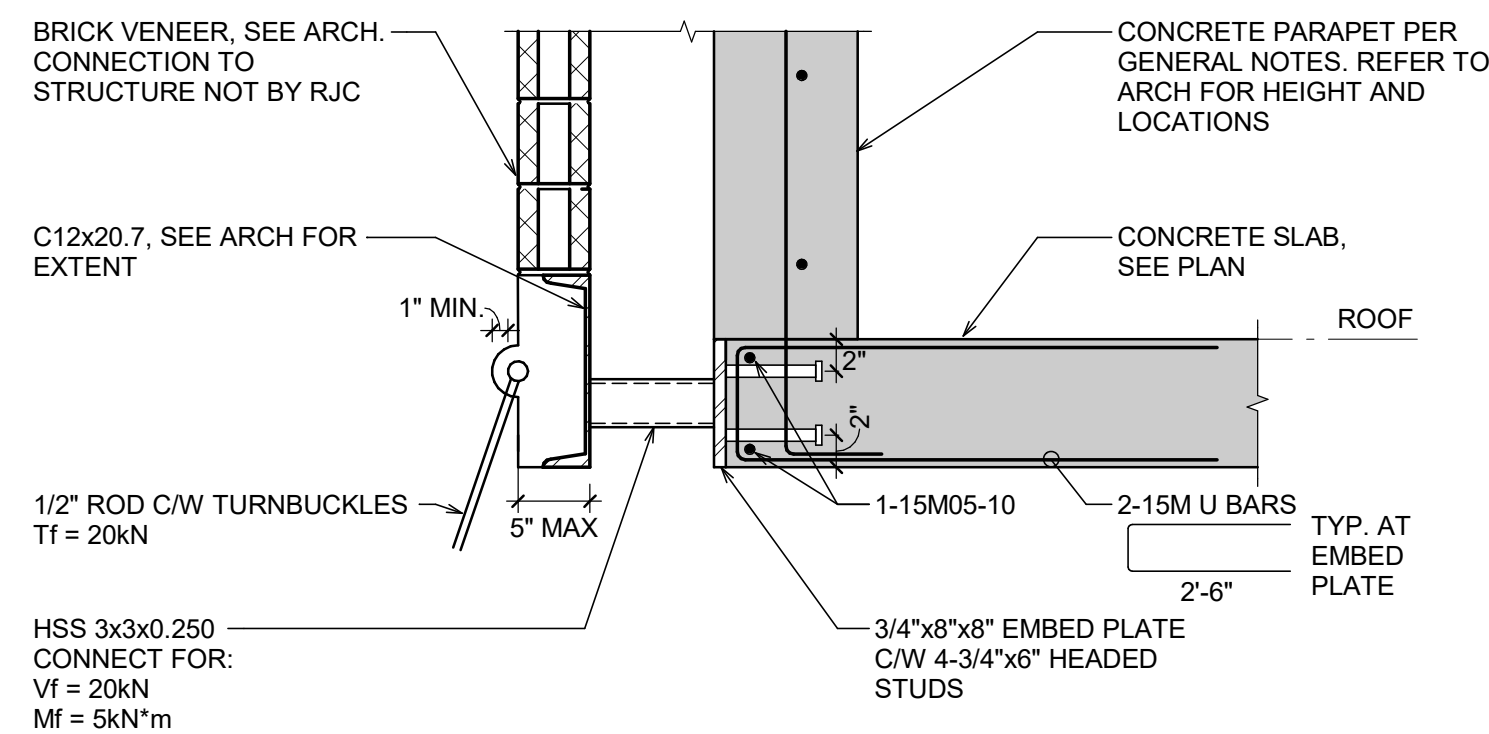
**3**  
**S4.04** SECTION  
1/2" = 1'-0"



**8**  
**S4.04** MECHANICAL SCREEN HSS  
1" = 1'-0"



**7**  
**S4.04** MECHANICAL SCREEN BLOCK  
1" = 1'-0"



**6**  
**S4.04** SECTION  
1" = 1'-0"

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1	Issued for Tender	2022-10-14	AP
No.	Revision	Date	By

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EGBC Permit to Practice No. 1002503

Project Name

**Northern Junk**

**1314-1318 Wharf Street, Victoria B.C.**

Sheet Title

**SECTIONS AND DETAILS**

Drawn By	MC	Scale	As indicated
Designed By	AP	Date	2023/08/23
RJC Project Number	VIC.100479.0006		
Sheet Number	Revision		

**S4.04**

**7**

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## **APPENDIX B**

### **Cost Assessments**

DISCRIPTION	TRADE TENDER (LOW BID)		TRADE TENDER (SECOND BID)		COST CONSULTANT
1 - Level 00 & Level 01 Structure (14.6%)	\$	221,105	\$	221,502	\$ 219,056
Excavation for Foundations	\$	19,039	HHS + MECI	\$ 31,115	Western Grater \$ 7,782
Formwork	\$	75,554	Blackrete	\$ 76,259	Michell \$ 42,980
Concrete Supply	\$	21,678	Butler / HB	\$ 22,292	Trio \$ 32,621
Reinforcing Steel	\$	26,630	Harris / Nucor	\$ 28,691	Viking \$ 34,793
Rock Anchors	\$	58,850	Kani	\$ 63,145	Western Grater \$ 78,840
Steel Bracing - Heritage Walls to New Concrete Structure	\$	19,354	Accord	Included in Item 2	Alliance \$ 22,040
2 - Steel Strongbacks	\$	623,008	\$	1,000,402	\$ 599,791
Steel	\$	335,715	Accord	\$ 560,378	Alliance \$ 423,380
Grouting	\$	10,209	Heritage	\$ 3,350	Heritage Included
Dowelling (Drill & Epoxy)	\$	277,084	Banyan	\$ 436,674	Banyan + Strathcona \$ 173,400
Pedestals		Breakout Not Incl.		Breakout Not Incl.	\$ 3,011
3 - Wood Strongbacks	\$	290,494	\$	305,051	\$ 82,758
Salvage/S&I Wood Strongbacks	\$	278,204	Bin There + Heathrebrae	\$ 294,187	Unbuilders + Heatherbrae \$ 34,725
Steel	\$	12,290	Accord	\$ 10,864	Alliance \$ 13,580
Grounding		Included in Item 2	Heritage	Included in Item 2	Heritage Included
Dowelling (Drill & Epoxy)		Included in Item 2	Banyan	Included in Item 2	Banyan + Strathcona \$ 33,600
Pedestals		Breakout Not Incl.		Breakout Not Incl.	\$ 853
4 - Lintels	\$	361,825	\$	383,988	\$ 101,525
Openings & Salvage	\$	92,223	Heritage	\$ 221,385	Banyan Included in Item 8
Steel/Rebar/Form/Install	\$	264,640	Accord + Heatherbrae	\$ 157,500	Banyan + Alliance Item 2 Above \$ 101,525
Concrete Supply	\$	4,962	Butler / Heatherbrae	\$ 5,103	Trio Included
5 - Seismic Restraint for East Heritage Façade	\$	28,913	\$	21,600	\$ 20,794
Steel	\$	28,913	Accord	\$ 21,600	Alliance \$ 20,140
Pedestals		Breakout Not Incl.		Breakout Not Incl.	\$ 654
6 - Foundation Waterproofing to Existing Heritage Walls	\$	172,529	\$	210,534	\$ 155,043
Excavation to perimeter foundation walls	\$	108,325	MECI	\$ 86,635	Milestone \$ 41,438
Parge Rubble Foundation Walls	\$	27,032	Banyan	\$ 47,899	Blackrete \$ 19,575
SBS Waterproofing & Drainage Layer	\$	37,172	Flynn	\$ 76,000	Parker Johnston \$ 52,200
Rigid Insulation		Included	Flynn	Included	Parker Johnston \$ 7,830
Backfill		Excluded		Excluded	\$ 34,000
Make Good Surface		Excluded		Excluded	Excluded
7 - Underpinning Heritage Walls	\$	137,090	\$	290,192	\$ 520,318
Excavation	\$	17,532	Bin There	\$ 32,204	Milestone \$ 45,600
Form and Place Concrete	\$	27,546	Blackrete	\$ 109,594	Banyan \$ 105,120
Concrete Supply	\$	25,741	Butler	\$ 26,470	Trio \$ 105,600
Rebar	\$	32,750	Harris	\$ 70,000	LMS \$ 56,488
Dowelling (Drill & Epoxy)		Included in Item 2	Heatherbrae	Included in Item 2	Banyan \$ 172,800
Supply Threaded Rod	\$	17,000	Harris	\$ 36,336	LMS Included
Supply & Install Couplers	\$	10,366	Heatherbrae	\$ 10,366	Heatherbrae \$ 7,030
Xypex	\$	6,155	Butler	\$ 5,222	Trio \$ 12,320
Backfill		Excluded		Excluded	\$ 15,360
8 - Masonry Restoration	\$	651,539	\$	702,824	\$ 1,653,300
Scaffolding		Excluded		Excluded	\$ 143,325
Heritage Rubblestone & Red Brick Rehabilitation	\$	492,571	Banyan	\$ 576,633	Heritage \$ 179,280
Parpet Dismantle	\$	81,468	Banyan	\$ 33,794	Heritage \$ 35,400
East Façade Demo & Rebuild		Included	Banyan	Included	Heritage \$ 310,700
Interior Masonry Repointing	\$	24,000	Banyan	\$ 35,630	Heritage \$ 195,120
Stone & Brick Replacement	\$	50,000	Heatherbrae	\$ 50,000	Heatherbrae \$ 50,000
Lintel Cutting & Reinstatement		Included in Item 4	Heritage	Included in Item 4	\$ 623,800
Opening Rehabilitation & Brick Cleaning		Included in Item 4	Heritage	Included in Item 4	\$ 38,500
Sealer to Heritage Walls	\$	3,500	Empress	\$ 6,767	Gordon N Gordon \$ 77,175
9 - Wood Heritage Doors & Windows	\$	465,660	\$	477,360	\$ 558,996
Supply & Install Wood Doors & Windows	\$	398,534	Vintage	\$ 398,715	Oakridge \$ 415,210
Supply Heritage Door Hardware	\$	64,871	Access SMT	\$ 76,390	Northern \$ 143,786
Install Heriage Door Hardware	\$	2,255	CKT	\$ 2,255	CKT Included
10 - Exiting Levels 00 & 01	\$	-	\$	-	\$ 37,450
Handrails		Excluded		Excluded	\$ 15,000
Guardrails		Excluded		Excluded	\$ 12,000
Doors & Hardware		Excluded		Excluded	\$ 10,450
11 - Mechanical & Electrical Levels 00 & 01	\$	-	\$	-	\$ -
Mechanical		Excluded		Excluded	Excluded
Electrical		Excluded		Excluded	Excluded
Subtotal (Excluding GST)	\$	2,952,163	\$	3,613,453	\$ 3,949,031
	\$	544,674	\$	666,682	\$ 987,258
General Requirements	\$	442,824	\$	542,018	\$ 592,355
Fee	\$	101,850	\$	124,664	\$ 394,903
Design Contingency		Excluded		Excluded	Removed
GST		Excluded		Excluded	Excluded
TOTAL COST (EXCLUDING GST)	\$	3,496,837.07	\$	4,280,135.08	\$ 4,936,288.39