

PERSIGO WASTE WATER TREATMENT PLANT PRIMARY CLARIFIER REPAIRS

Owner: City of Grand Junction
Grand Junction, Colorado

Owners Representative: Kirsten Armbruster, PE
970.244.1421
kirstena@gjcity.org

Engineer-of-Record: Wiss, Janney, Elstner Associates, Inc. (WJE)
3609 South Wadsworth Boulevard, Suite 400
Lakewood, Colorado 80232

Engineer-of-Record: Mr. Terry McGovern, PE
Representative 303.914.4300
tmcgovern@wje.com

Project Address: Persigo Wastewater Treatment Plant
2145 River Road
Grand Junction, Colorado 81505

PRIMARY CLARIFIER PROJECT DESCRIPTION

The work at the Primary Clarifier repairs includes removal of the dome roof structure and installation of a concrete coating system on the interior of each clarifier tank.

SPECIAL CONSIDERATIONS

The Primary Clarifiers cannot be shutdown at the same time. Work on one Clarifier must be completed in full and the clarifier put back into service, prior to shutdown commencing on the next clarifier. Owner will clean Clarifiers after shutdown to an extent commensurate with that shown in Section 02 22 00. Contractor is responsible for providing access to clarifier for work. Contractor shall take care to not damage or otherwise clog any equipment or plumbing during surface preparation. Any repair or replacement of damaged equipment or plumbing will be withheld from payment or back charged to the Contractor. Contractor to coordinate rotation of the skimmers and other mechanical equipment, and positioning of the bottom screed plates, with the City in order to gain access for surface preparation and coating installation. Limiting the time of shutdown is critical for the work at the clarifiers. Contractors are encouraged to take reasonable steps to limit shutdown time.

The removal of the dome roof is a delegated design item to meet the requirements of the construction documents. There are no original drawings available for the dome structure. There is a 5'-0" minimum setback for heavy equipment that must be followed when working around the Clarifiers and adjacent structures that must be considered when developing a removal plan.

DRAWING SUBMITTALS

1. Shutdown plan for taking structures offline to perform the work. Submit with bid.
2. Shutdown and site plan for Add Alternate 5-4, assuming the existing dome roof will be undamaged during removal, and stored for later re-use by the City. Submit with bid.

REQUIRED MOCKUP SUMMARY

1. A mockup of concrete coating shall be performed and testing completed prior to full-scale coating work.
2. Guardrail mockup of one section adjacent to Pump Station.

GENERAL NOTES

- Drawings and associated Specifications (referred to in general as the Construction Documents) apply only to the specific project identified in Titleblock, and shall not be used for any other purpose without specific written consent of Engineer, Engineer's sub-consultants, and Owner. Any unauthorized use of Engineer's work product shall be at user's sole risk and user shall indemnify Engineer against any liability or legal exposure related to the unauthorized use.
- Drawings and Specifications are complementary, are to be taken as a whole, and should include sufficient information necessary for the execution and completion of the work in a manner consistent with the design intent. In the absence of explicit or reasonably inferable information on drawings or in specifications, promptly seek clarification from Engineer as a request for information.
- Contractor is solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work. Engineer has no such responsibilities beyond its own employees.
- In an emergency affecting safety of persons or property, act to prevent or stop further damage, injury, or loss.
- If a hazardous material or substance not addressed in the Construction Documents is encountered, immediately stop work in affected area and notify Owner and Engineer of the condition.
- Temporarily relocate and restore existing equipment and appurtenances (whether or not shown on the drawings) that obstruct access to portions of the Work. Notify and coordinate with Owner prior to doing so.
- Develop, implement, erect, and maintain safeguards to prevent damage, injury, or loss resulting from the work to (a) workers, occupants, passers-by, and other persons; (b) in-progress work, materials, and equipment under care, custody, and control of the contractor (whether on or off site); and (c) other property at the site or adjacent thereto not designated as part of the work for removal, relocation, or replacement. In the event of damage, injury, or loss, promptly notify Engineer and Owner and present proposed remedy. All damage to these elements must be repaired to the satisfaction of the Owner.
- Promptly correct work rejected by Engineer or failing to conform to requirements of the Construction Documents. Associated costs (including additional testing or inspections, cost of uncovering and correction, and compensation for Engineer's services and expenses made necessary thereby) shall be the Contractor's responsibility.
- Dimensions, quantities, and geometries provided for existing construction are based on original drawings and limited field documentation by Engineer. Field verify applicable information prior to submitting a bid, ordering materials, or otherwise committing resources to the Work. Provided dimensions take precedence over scaled dimensions. Dimensions of the new construction shall be adjusted as necessary to fit the existing conditions. The Engineer shall be notified in writing of any significant deviations from the dimensions or conditions shown on these drawings.
- Drawings illustrate the completed work with elements in their final intended positions. Provide shoring, bracing, support, and sequence work as required to maintain the structural integrity of new or existing construction during the work.
- Contractor is solely responsible for, and shall have sole control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the work. Engineer has no such responsibilities. Specific instruction that may be given in Construction Documents concerning construction means, methods, techniques, sequences, or procedures shall not relieve contractor of its responsibility for control and coordination.
- Provide labor, materials, equipment, supervision, and coordination directly and incidentally necessary to perform the work in accordance with Construction Documents.
- Promptly report to Engineer as a request for information known or suspected errors, inconsistencies, or omissions within or between Construction Documents, as well as known or suspected variance of the Construction Documents from existing conditions. Await direction from Engineer prior to proceeding with Work. For bidding purposes only, and unless otherwise directed by Engineer, the more stringent requirement or better quality shall take precedence as determined by Engineer.
- Activities or duties of Engineer, or tests, inspections, or approvals required or performed by third parties shall not relieve Contractor of its obligation to perform the Work in accordance with Construction Documents.

| Keyed Note Schedule | | | | | | | |
|---------------------|-------------------|----------------------------------|------|-----------------------------------|--|------------------------------------|---------------------|
| Callout | Plan Hatch/Symbol | Name | Unit | Total Estimated Quantity | Description | Reference Specification Section(s) | Reference Detail(s) |
| 5-1 | | Concrete Coating | SF | 7,700 SF Each 15,400 SF Total | Properly prepare concrete surface and install immersion grade concrete coating on Clarifier walls, trough, sludge pits, etc. as noted on 5.4. Up to 1/8 inch of surface removal typically anticipated. However, due to anticipated acid leaching of the concrete, the concrete shall be removed during preparation at the upper portions of the clarifiers as indicated on Sheet 5.5. | 09 97 23 | 5.5 |
| Alternate 5-2 | None | Concrete Coating | SF | 10,300 SF Each 20,600 SF Total | Properly prepare concrete surface and install immersion grade concrete coating on Clarifier slabs, as noted on 5.4. Up to 1/8 inch of surface removal typically anticipated. | 09 97 23 | 5.5 |
| 5-3 | None | Remove Dome & Entrance Extension | EA | 2 | Remove metal dome structure. Properly terminate mechanical and electrical items at connection to Pump Station. Grind down flush connection hardware after removal to allow for installation of new coating. | 02 41 19 | 5.2 |
| Alternate 5-4 | | Remove & Salvage Dome | EA | 2 | Remove metal dome structures (not inclusive of entrance extensions), to be salvaged for re-use. | 02 41 19 | 5.2 |
| 5-5 | | Guardrail | LF | 380 LF Each 760 LF Total | Install guardrail at locations indicated after dome and entrance extension removal. Guardrail shall match in appearance (number of members, size, components, etc.) as closely as possible the existing guardrails. Guardrail system shall include 4-inch kick plate when adjacent to walking surfaces. Provide temporary fencing at perimeter of clarifier walls prior to final installation. | 05 52 00 | 1/5.5 |
| 5-6 | | New Grating | SF | 30 SF Each 60 SF Total | Install new grating at Clarifier entrance platforms, to cover the sludge and scum pits. New grating to match existing. | 05 53 00 | 5.4 |

| ABBREVIATIONS: | | INDEX TO DRAWINGS: | | SYMBOLS LEGEND: | |
|----------------|---------------|--------------------|--------------------------------|-----------------|----------------------------|
| CLR | CLEAR | 5.0 | COVER SHEET AND GENERAL NOTES | | EXISTING FULL HEIGHT WALL |
| CONN. | CONNECTION | 5.1 | DEMOLITION PLAN | | MAXIMUM DESIGN FLUID LEVEL |
| (E) | EXISTING | 5.2 | DEMOLITION SECTION AND DETAILS | | SOIL/EARTH |
| FV | FIELD VERIFY | 5.3 | MEP DEMOLITION PHOTOGRAPHS | | CONCRETE COATING |
| LF | LINEAL FEET | 5.4 | PLAN | | EXISTING DOME HATCH |
| MAX | MAXIMUM | 5.5 | SECTION AND DETAILS | | GUARDRAILS |
| MIN | MINIMUM | 5.6 | SECTION AND DETAILS | | GRATING |
| MISC. | MISCELLANEOUS | 5.7 | DETAILS | | |
| (N) | NEW | | | | |
| OPP | OPPOSITE | | | | |
| RE | REFERENCE | | | | |
| SIM | SIMILAR | | | | |
| SF | SQUARE FEET | | | | |
| TYP | TYPICAL | | | | |
| w/ | WITH | | | | |

Quality Control Testing Summary

| Item or Test | Keyed Note(s) | Frequency | Reference Specification Section(s) | Reference Standard(s) |
|--|---------------|--|------------------------------------|-----------------------|
| Coating Adhesion Testing (Puck Pull-Off) | 5-2 | 1 Additional Location EA Clarifier During Production | 09 97 23 | ASTM D7234 |
| Sealant Adhesion Testing | N/A | See Specification | 07 92 00 | ASTM C1521 |

Notes:
1. This testing shall be performed by the Testing Agency, Coating Inspector or Engineer, with assistance from the Contractor as noted in the Specification Sections.

- Secure and pay for all permits, fees, licenses, and inspections by government agencies necessary for proper and compliant execution and completion of the work. Contractor shall be properly licensed to perform the specified Work.
- Comply with and give notices required by laws, statutes, ordinances, codes, rules and regulations, and lawful orders of authorities having jurisdiction applicable to the Work.
- The Work will be performed at an occupied and operational facility. Coordinate construction activities and procedures with Owner to (a) maintain unobstructed existing means of egress from facility; (b) comply with facility's existing security procedures and requirements; and (c) provide not less than 48 hours advance notice to and gain approval from Owner prior to construction activities that will disrupt normal use of facility (including exceptional noise and/or vibrations, uncontrolled dust, obtrusive odors, or interruptions of utilities). Work not coordinated and approved in advance that disrupts the normal use of the facility may be stopped until proper coordination and approval is achieved. Contractor shall be responsible for any costs incurred as a consequence of stoppage.
- Coordinate locations of on-site storage of materials and equipment with Owner so as to not unreasonably encumber facility or site. Do not allow construction materials, equipment, or procedures to overload or exceed the structural capacity of existing construction to remain, partially completed work, or completed work. Make inspections and/or perform analyses and tests necessary to verify that existing elements have adequate capacity to support proposed construction loads.

BUILDING CODES AND LOADS

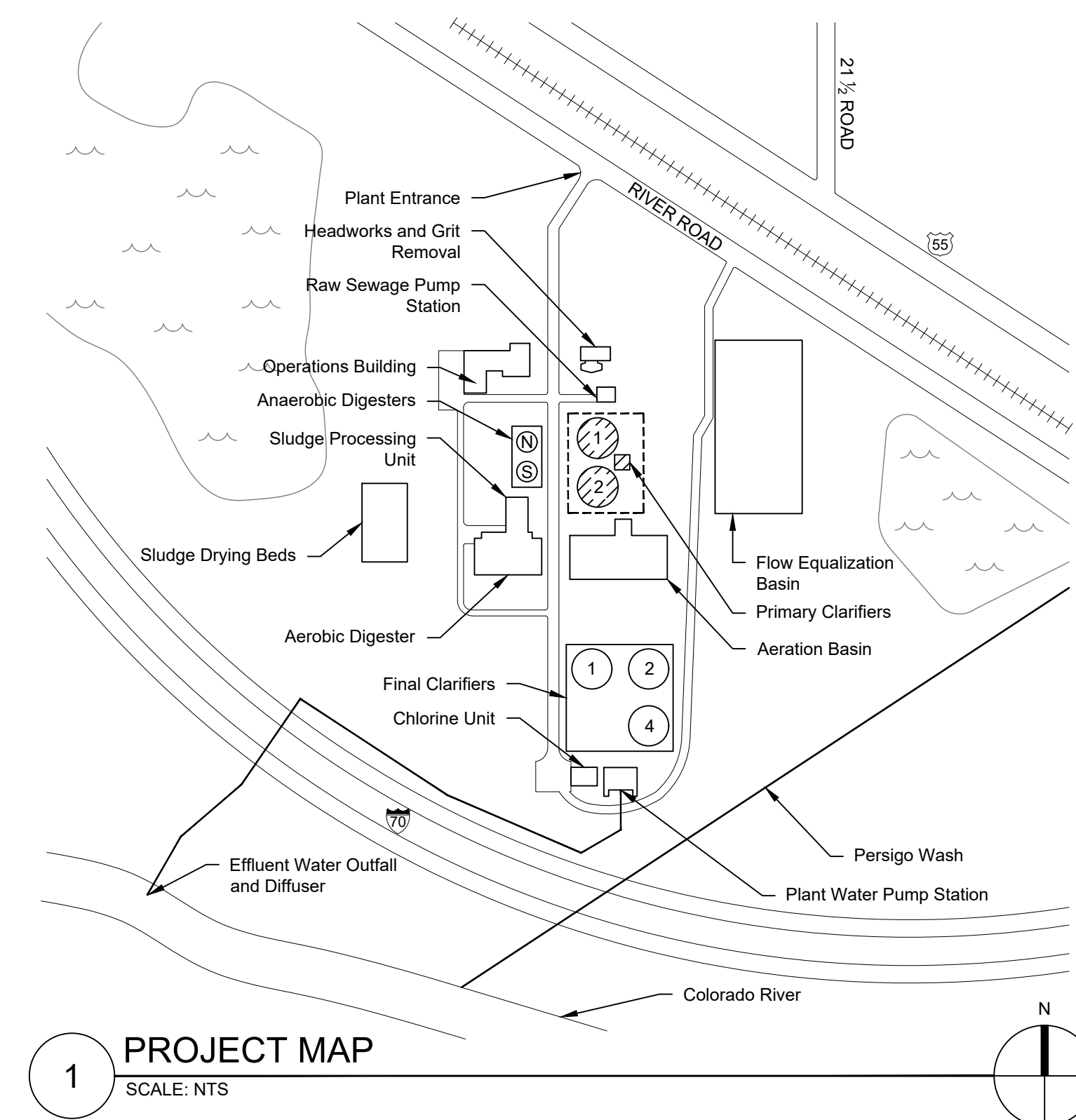
- Original Building Code Under Which the Structures were Constructed: Not Specified
 - Original Construction Documents prepared by Henningsson, Durham and Richardson (HDR), Inc. dated May 1985, are available for review from Owner's Representative.
- Current Building Code and Basis for Repair Work: The 2018 International Existing Building Code (IEBC), as adopted by the Mesa County Building Inspection Department, shall serve as the Governing Building Code for the Work.

INSPECTIONS AND OBSERVATIONS

- Observations are performed by the Engineer, or licensed design professional.
- Special Inspections shall be performed by a qualified Testing Agency or Special Inspector. Additional inspections may be performed by the local building authority.
- All construction shall be subject to review (observation) by the Engineer before it is concealed from view. Coordinate expected review items with the Engineer prior to the start of construction. Provide reasonable notification to the Engineer to allow for such review as the Work proceeds, 48 hours minimum unless noted otherwise.
- Contractor to pay for and provide access for all inspections and observations, regardless of the entity retaining such services.

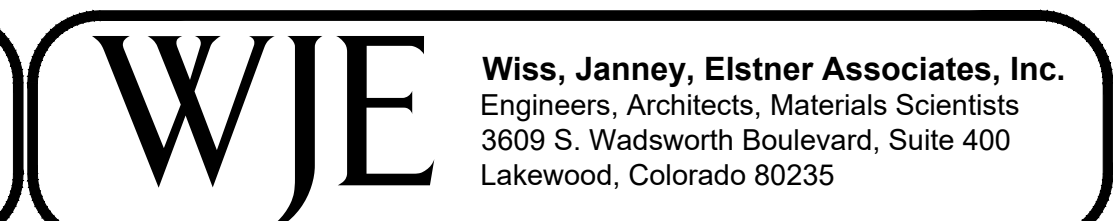
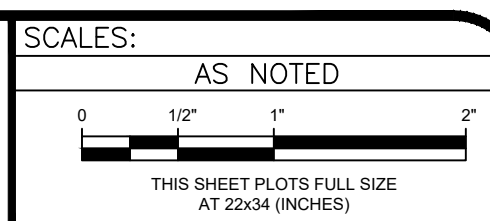
MATERIAL PROPERTIES

- Original Construction (Per Sheet IV-39 of Original Drawings)
 - Concrete Compressive Strength (f_c) 4000 psi at 28 days using normal weight aggregate.
 - No. 4 and larger reinforcing steel ASTM A615-76a Grade 60.
- The dome structure materials are unknown, field verify. Original construction documents (drawings and specifications) for the dome structure are not available.



| REVISION | DESCRIPTION | DATE |
|------------|---------------------------|----------|
| REVISION Δ | CONCRETE COATING REVISION | 6/8/2021 |
| REVISION Δ | | |
| REVISION Δ | | |
| REVISION Δ | | |

| | | | |
|-------------|---------|------|----------|
| DRAWN BY | BRS/CRS | DATE | 04/07/21 |
| DESIGNED BY | AGL/TMM | DATE | 04/07/21 |
| CHECKED BY | SWF | DATE | 04/07/21 |
| APPROVED BY | TMM | DATE | 04/07/21 |



PRIMARY CLARIFIER
COVER SHEET

| Keyed Note Summary | | | |
|--------------------|-------------------|----------------------------------|---------------------------------------|
| Callout | Plan Hatch/Symbol | Name | Total Estimated Quantity (This Sheet) |
| 5-3 | | Remove Dome & Entrance Extension | 2 EA |
| ALTERNATE 5-4 | | Remove & Salvage Dome | 2 EA |

NOTE: SEE KEYED NOTE SCHEDULE ON 5.0.

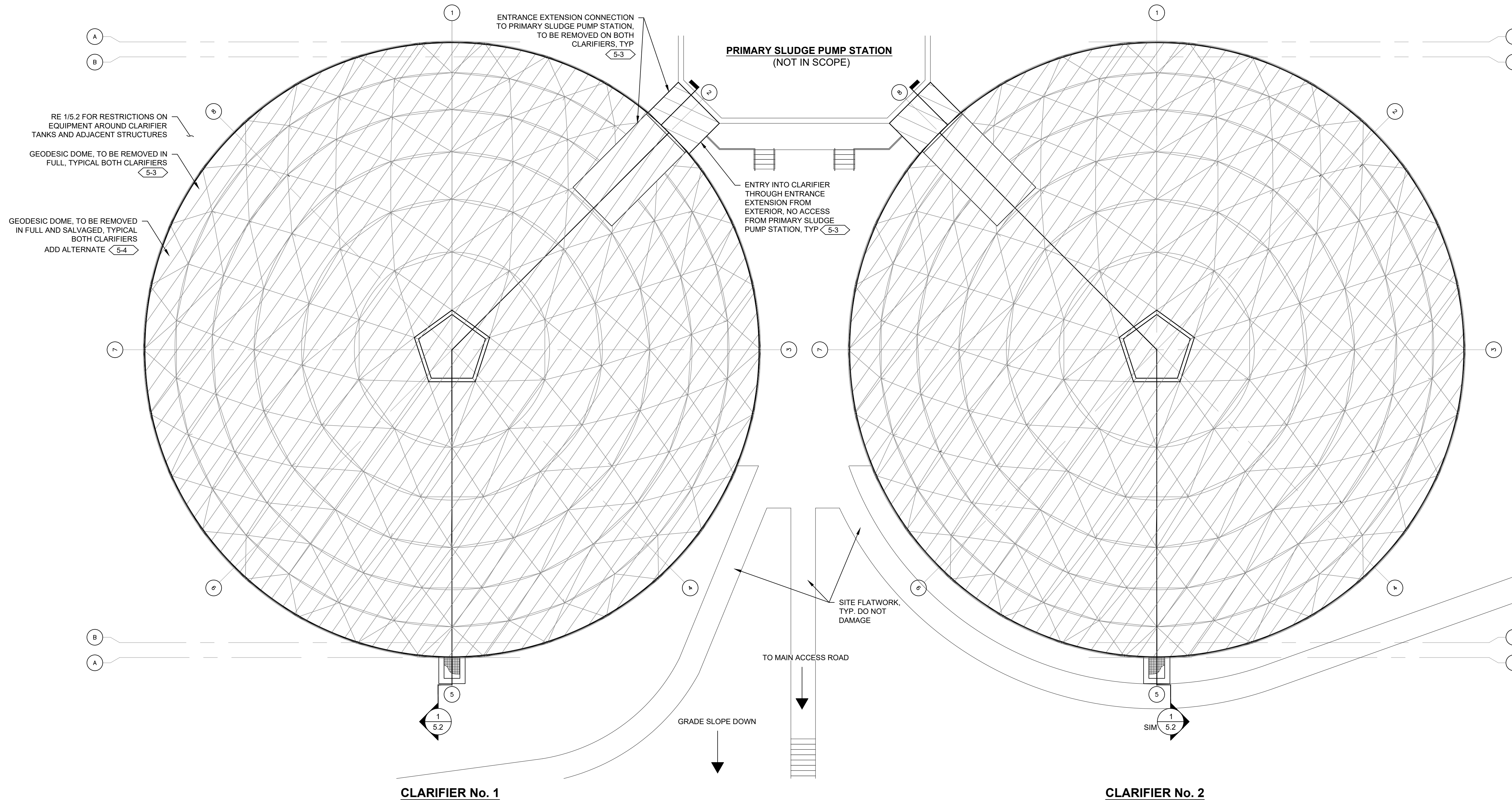
KEYED NOTE LEGEND

KEYNOTE CALLOUT: RE: KEYED NOTE SCHEDULE ON SHEET 5.0 FOR ALL SPECIFIC REPAIR INFORMATION

QUANTITY OF REPAIRS TO OCCUR AT NOTED LOCATION: RE: KEYED NOTE SCHEDULE ON SHEET 5.0 FOR QUANTITY INFORMATION (if applicable)

ARROW DESIGNATES APPROXIMATE LOCATION OR AREA OF REPAIR TO BE PERFORMED

USED TO DESIGNATE APPROXIMATE AREA OF WORK, IF APPLICABLE

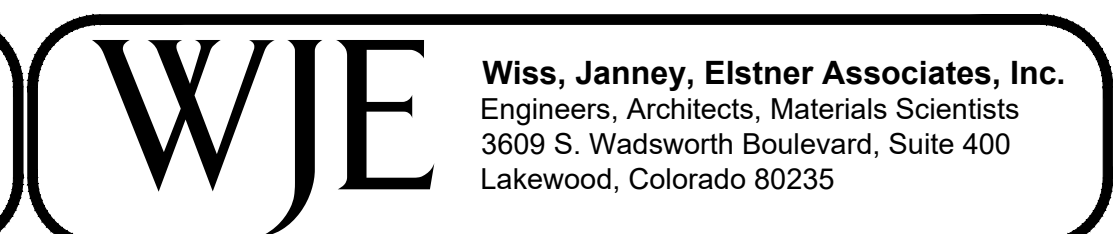


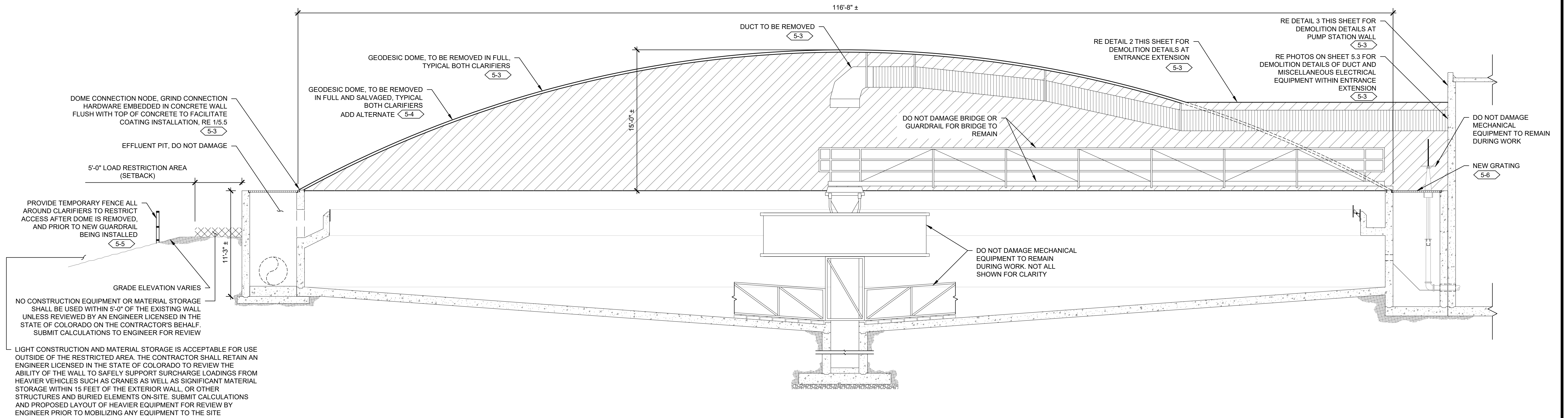
1 Primary Clarifier Demolition Plan
 SCALE: 3/32" = 1'-0"

- SHEET NOTES:**
- REFERENCE ORIGINAL DRAWINGS IV-12 TO IV-14 AND V-7 TO V-8 FOR ADDITIONAL INFORMATION.
 - GRADE NOT SHOWN IN FULL. CONTRACTOR IS RESPONSIBLE FOR VISITING SITE AND VERIFYING SLOPES AROUND SITE WHICH MAY IMPACT WORK.
 - EXTENSIVE UNDERGROUND UTILITIES ARE PRESENT ON-SITE. COORDINATE WITH OWNER TO PERFORM LOCATES. DO NOT DAMAGE BURIED OR CONCEALED ELEMENTS. COORDINATE ACCESS AND DEMOLITION PLANS TO PREVENT DAMAGE. REPAIR ALL DAMAGE RESULTING FROM THE PERFORMANCE OF THE WORK AT NO COST TO OWNER.
 - MOST AREAS AROUND CLARIFIERS ARE GRASS WITH IRRIGATION. CONTRACTOR SHALL SEED ANY AREAS OF DAMAGED GRASS, AND REPAIR ALL DAMAGE TO IRRIGATION RESULTING FROM THE PERFORMANCE OF THE WORK AFTER COMPLETION OF WORK.

CLARIFIER No. 2
PLAN NOTE:
 1. ALL WORK AREAS FROM CLARIFIER No. 1 APPLY TO CLARIFIER No. 2.

| REVISION | DESCRIPTION | DATE | DRAWN BY | DATE | SCALES: |
|------------|---------------------------|----------|----------|----------|--|
| REVISION A | CONCRETE COATING REVISION | 6/8/2021 | BRS/CRS | 04/07/21 | AS NOTED |
| REVISION B | | | AGL/TMM | 04/07/21 | 0 1/2" 1" 2" |
| REVISION C | | | SWF | 04/07/21 | THIS SHEET PLOTS FULL SIZE AT 22x34 (INCHES) |
| REVISION D | | | IMM | 04/07/21 | |





1 Primary Clarifier Demolition Section

SCALE: 3/16" = 1'-0"

SHEET NOTES:

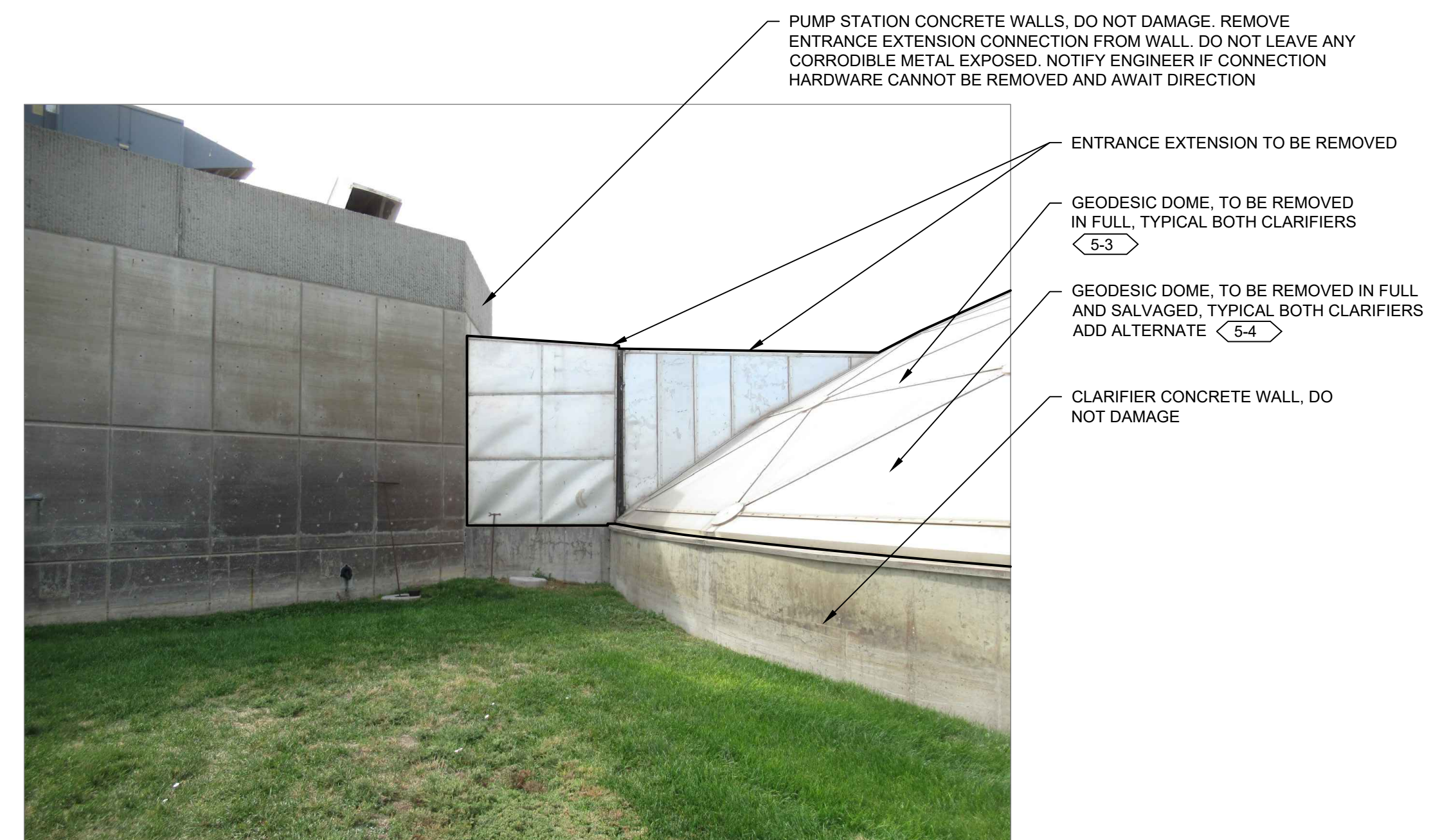
1. REFERENCE ORIGINAL DRAWINGS IV-12 TO IV-14, V-7 TO V-8, AND VI-8 TO VI-9 FOR ADDITIONAL INFORMATION.
2. MECHANICAL EQUIPMENT AND PLUMBING NOT SHOWN IN FULL. DO NOT DAMAGE ITEMS NOT IDENTIFIED FOR DEMOLITION.
3. REFERENCE WJE GEOTECHNICAL INVESTIGATION REPORT DATED OCTOBER 22, 2019, FOR ADDITIONAL INFORMATION AND TO DETERMINE ACCEPTABLE LOADINGS.

NO CONSTRUCTION EQUIPMENT OR MATERIAL STORAGE SHALL BE USED WITHIN 5'-0" OF THE EXISTING WALL UNLESS REVIEWED BY AN ENGINEER LICENSED IN THE STATE OF COLORADO ON THE CONTRACTOR'S BEHALF. SUBMIT CALCULATIONS TO ENGINEER FOR REVIEW.

LIGHT CONSTRUCTION AND MATERIAL STORAGE IS ACCEPTABLE FOR USE OUTSIDE OF THE RESTRICTED AREA. THE CONTRACTOR SHALL RETAIN AN ENGINEER LICENSED IN THE STATE OF COLORADO TO REVIEW THE ABILITY OF THE WALL TO SAFELY SUPPORT SURCHARGE LOADINGS FROM HEAVIER VEHICLES SUCH AS CRANES AS WELL AS SIGNIFICANT MATERIAL STORAGE WITHIN 15 FEET OF THE EXTERIOR WALL, OR OTHER STRUCTURES AND BURIED ELEMENTS ON-SITE. SUBMIT CALCULATIONS AND PROPOSED LAYOUT OF HEAVIER EQUIPMENT FOR REVIEW BY ENGINEER PRIOR TO MOBILIZING ANY EQUIPMENT TO THE SITE.



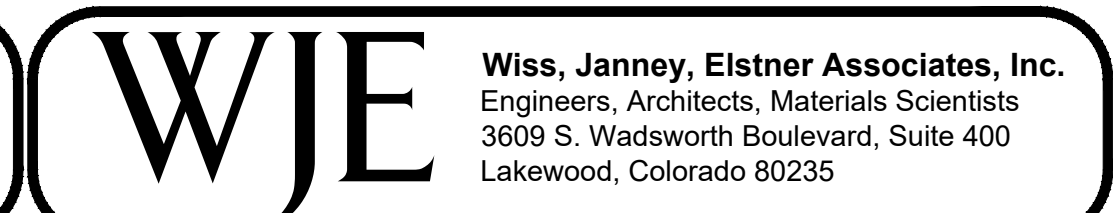
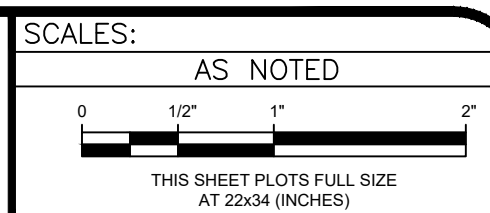
2 Frontside Entrance Extension Elevation Detail 5-3
 SCALE: NOT TO SCALE



3 Backside Entrance Extension Elevation Detail 5-3
 SCALE: NOT TO SCALE

| REVISION | DESCRIPTION | DATE |
|------------|---------------------------|----------|
| REVISION A | CONCRETE COATING REVISION | 6/8/2021 |
| REVISION B | | |
| REVISION C | | |
| REVISION D | | |

DRAWN BY BRS/CRS DATE 04/07/21
 DESIGNED BY AGL/TMM DATE 04/07/21
 CHECKED BY SWF DATE 04/07/21
 APPROVED BY TMM DATE 04/07/21



PRIMARY CLARIFIER
 DEMOLITION SECTION & DETAILS



DEMISING WALL BETWEEN ENTRANCE EXTENSION (LEFT PHOTO) AND PRIMARY SLUDGE PUMP ROOM (RIGHT PHOTO). REMOVE ALL DUCT WORK AND REPAIR HOLE THROUGH DEMISING WALL (ASSUMED TO BE 12"-14" THICK WALL). CONCRETE SHALL BE REPAIRED WITH CONCRETE, AND BLOCK SHALL BE REPAIRED WITH BLOCK TO MATCH EXISTING. HOLE SHALL BE FULLY SEALED AGAINST AIR AND WATER INFILTRATION. CONTRACTOR SHALL SUBMIT PROPOSED MATERIALS AND PLAN TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH WORK. CONCRETE REPAIR SHALL INCLUDE MOCKUPS FOR COLOR MATCH TO BE APPROVED BY OWNER

WATER SUPPLY LINE TO CLARIFIERS, DO NOT DAMAGE

NEW GRATING, SUPPORT CONDITIONS AND GRATING TYPE TO MATCH EXISTING
 5-6

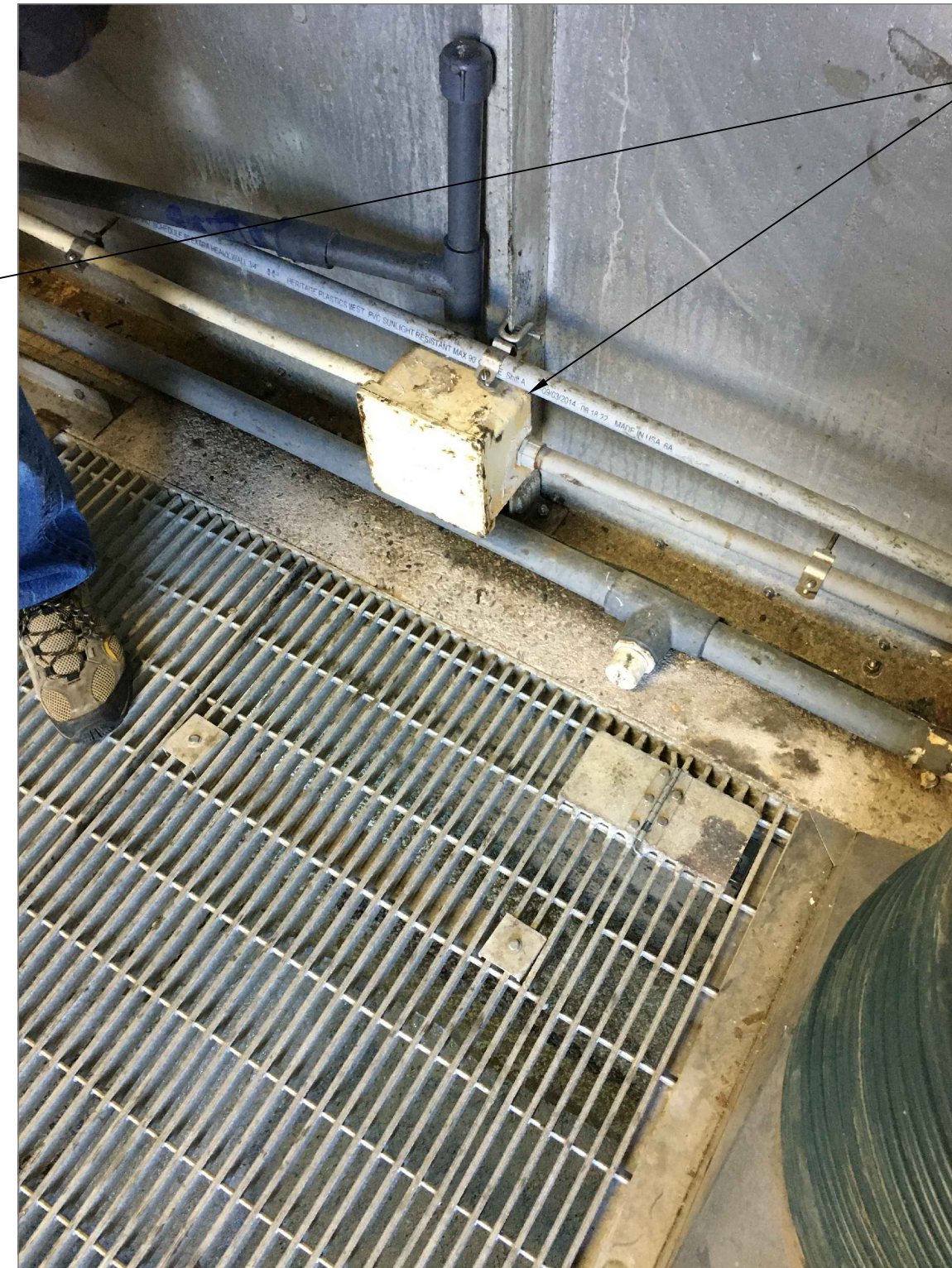


MECHANICAL DUCT TO BE REMOVED. ALL CEILING-MOUNTED ELECTRICAL ITEMS TO BE REMOVED

LIGHT FIXTURE AND ALL SUPPORTING ELECTRICAL CONDUIT AT END OF CATWALK TO REMAIN



1 Mechanical Duct Removal
 SCALE: NOT TO SCALE

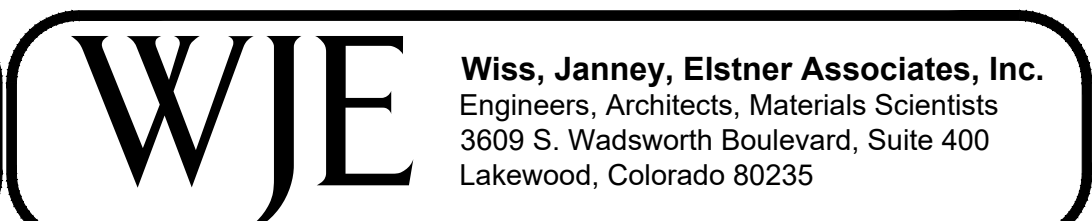


ALL ELECTRICAL COMPONENTS AFFIXED TO SIDE WALLS OF ENTRANCE EXTENSION ASSUMED TO REMAIN AS PART OF THE REPAIRS. CONTRACTOR TO COORDINATE WITH THE CITY REGARDING RELOCATION AND PLACEMENT



2 Electrical Components
 SCALE: NOT TO SCALE

| REVISION | DESCRIPTION | DATE | DRAWN BY | DATE | SCALES: |
|------------|---------------------------|----------|----------|----------|--|
| REVISION A | CONCRETE COATING REVISION | 6/8/2021 | BRS/CRS | 04/07/21 | AS NOTED |
| REVISION A | | | AGL/TMM | 04/07/21 | 0 1/2" 1" 2" |
| REVISION A | | | SWF | 04/07/21 | THIS SHEET PLOTS FULL SIZE AT 22x34 (INCHES) |
| REVISION A | | | TMM | 04/07/21 | |



| Keyed Note Summary | | | |
|--------------------|-------------------|--|--|
| Callout | Plan Hatch/Symbol | Name | Total Estimated Quantity (This Sheet) |
| 5-1 | None | Concrete Coating on Clarifier walls, trough, sludge pits, etc. | No. 1 - 7,700 SF No. 2 - 7,700 SF |
| 5-2 | None | Concrete Coating on Clarifier slabs | No. 1 - 10,300 SF No. 2 - 10,300 SF |
| 5-5 | ===== | Install Guardrail | No. 1 - 380 LF No. 2 - 380 LF |
| 5-6 | ▨ | New Grating | No. 1 - 30 SF No. 2 - 30 SF |

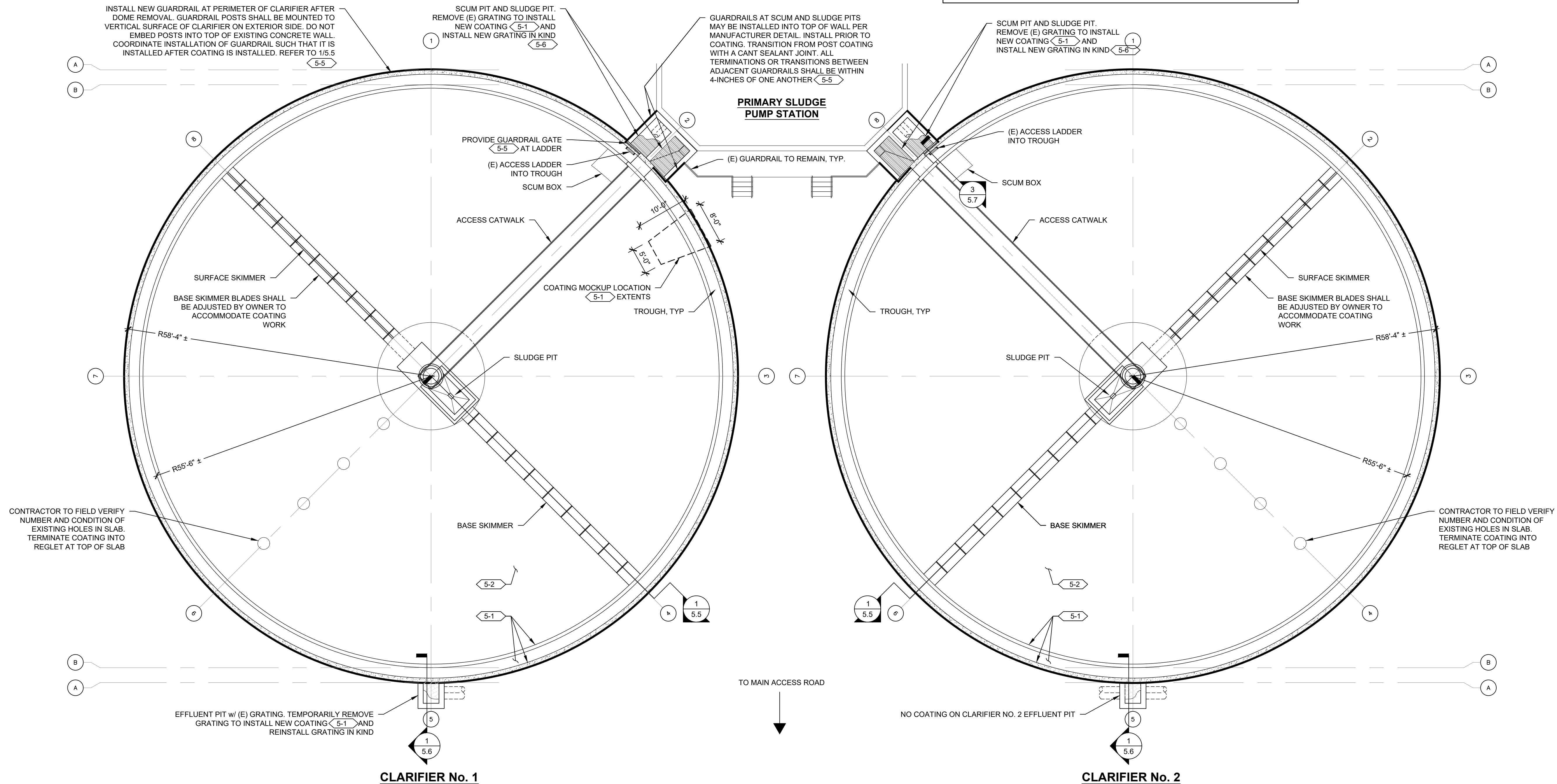
NOTE: SEE KEYED NOTE SCHEDULE ON 5.0.

KEYED NOTE LEGEND

KEYNOTE CALLOUT: RE: KEYED NOTE SCHEDULE ON SHEET 5.0 FOR ALL SPECIFIC REPAIR INFORMATION

QUANTITY OF REPAIRS TO OCCUR AT NOTED LOCATION: RE: KEYED NOTE SCHEDULE ON SHEET 5.0 FOR QUANTITY INFORMATION (if applicable)

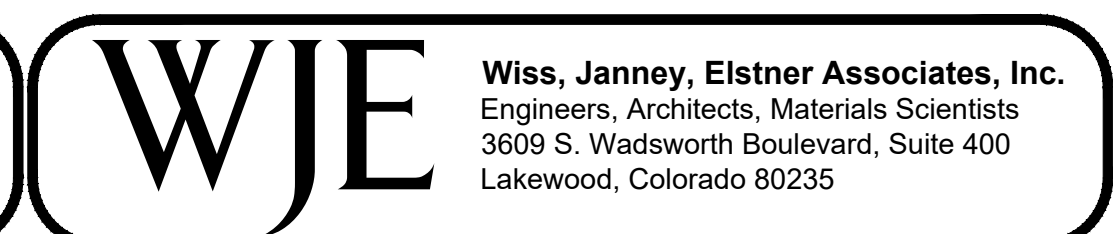
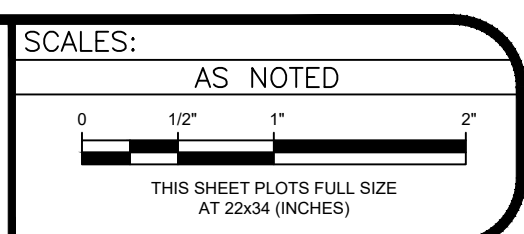
ARROW DESIGNATES APPROXIMATE LOCATION OR AREA OF REPAIR TO BE PERFORMED

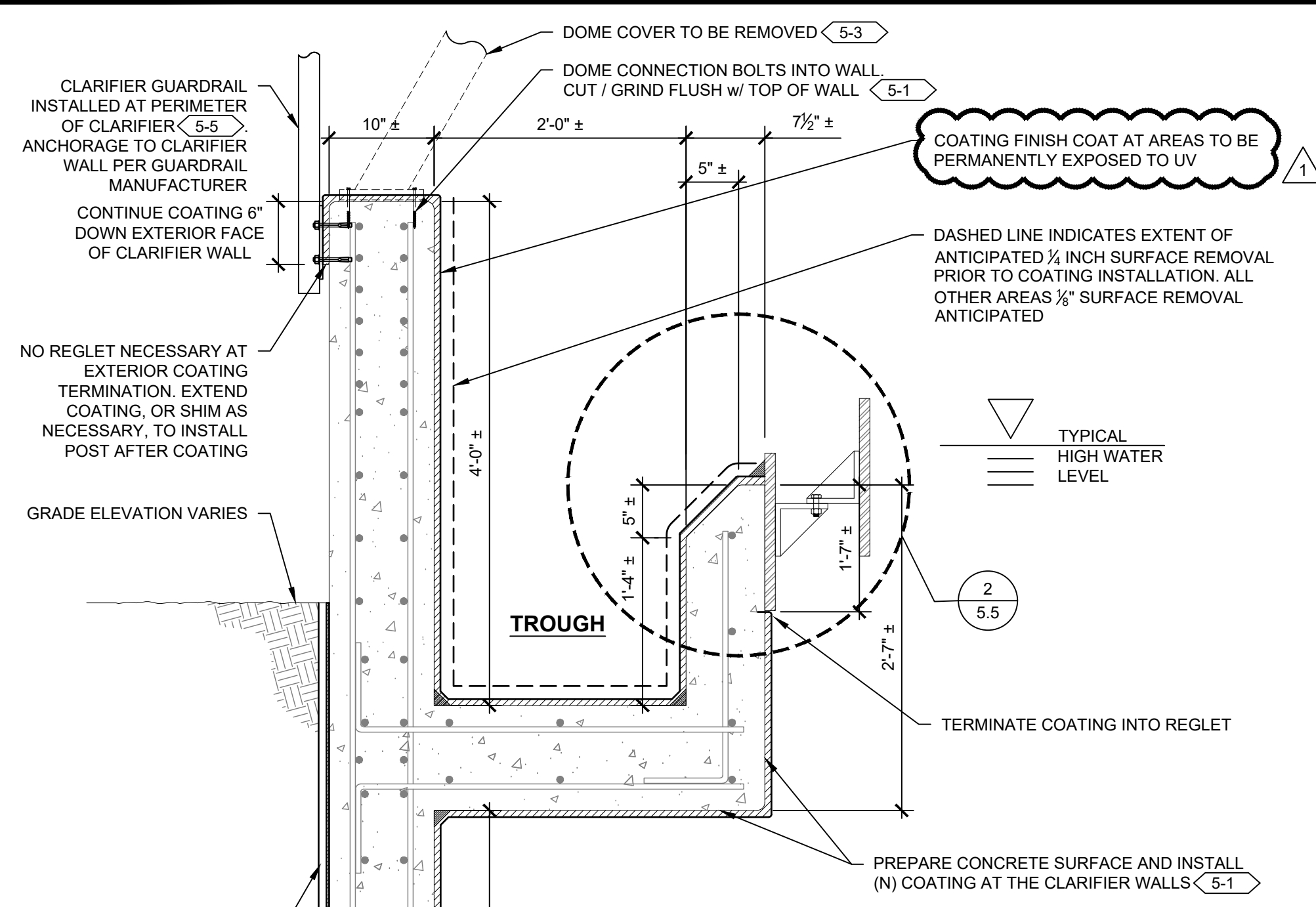


1 Primary Clarifier Plan
 SCALE: 3/32" = 1'-0"
SHEET NOTES:
 1. REFERENCE ORIGINAL DRAWINGS IV-12 TO IV-14 AND V-7 TO V-8 FOR ADDITIONAL INFORMATION.
 2. MECHANICAL EQUIPMENT AND PLUMBING NOT SHOWN IN FULL. DO NOT DAMAGE. COORDINATE MOVEMENT WITH OWNER. OWNER WILL ADJUST HEIGHT OF BLADES TO ALLOW FOR COATING WORK.

PLAN NOTE:
 1. ALL WORK AREAS FROM CLARIFIER No. 1 APPLY TO CLARIFIER No. 2.

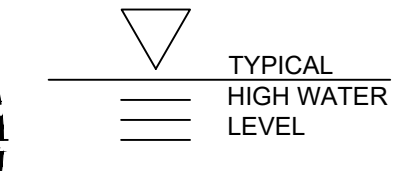
| REVISION | DESCRIPTION | DATE | DRAWN BY | DATE |
|-------------------|---------------------------|----------|----------|----------|
| REVISION Δ | CONCRETE COATING REVISION | 6/8/2021 | BRS/CRS | 04/07/21 |
| REVISION Δ | | | AGL/TMM | 04/07/21 |
| REVISION Δ | | | SWF | 04/07/21 |
| REVISION Δ | | | IMM | 04/07/21 |





COATING FINISH COAT AT AREAS TO BE PERMANENTLY EXPOSED TO UV

DASHED LINE INDICATES EXTENT OF ANTICIPATED 1/4 INCH SURFACE REMOVAL PRIOR TO COATING INSTALLATION. ALL OTHER AREAS 1/8\"/>



2
5.5

TERMINATE COATING INTO REGLET

PREPARE CONCRETE SURFACE AND INSTALL (N) COATING AT THE CLARIFIER WALLS <5-1>

TROUGH

(E) WATERPROOFING AND PROTECTION BOARD

CONCRETE REPAIR AS IDENTIFIED BY ENGINEER AFTER CONCRETE SURFACE PREPARATION. ALLOWANCE PROVIDED IN BID FORM. BASED ON REVIEW IN CLARIFIER No. 1, MINIMAL TO NO CONCRETE REPAIRS ANTICIPATED

ANY CONCRETE CRACKS IN THE SUBSTRATE SHALL BE EVALUATED AFTER SURFACE PREPARATION IS COMPLETED. PREPARE AND TREAT CRACKS IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS. IF CRACKS REQUIRE ROUT AND SEAL, CONTRACTOR SHALL BE COMPENSATED FOR WORK ON A PER LINEAR FOOT BASIS TAKEN FROM A BID ALLOWANCE. ALL OTHER PREPARATION SHALL BE INCLUDED IN COATING COST

(N) COATING SYSTEM, TYP

CONCRETE WALL, TYP

(N) COVE SEALANT JOINT BELOW COATING

CONCRETE BASE SLAB / TOPPING

IF COATING SLAB IS NOT INCLUDED IN SCOPE OF WORK, CONTINUE WALL COATING 12\"/>

CLARIFIER BASIN

PREPARE CONCRETE SURFACE AND INSTALL (N) COATING AT THE CLARIFIER SLAB <5-2>

MECHANICAL EQUIPMENT BEYOND, DO NOT DAMAGE OR COAT

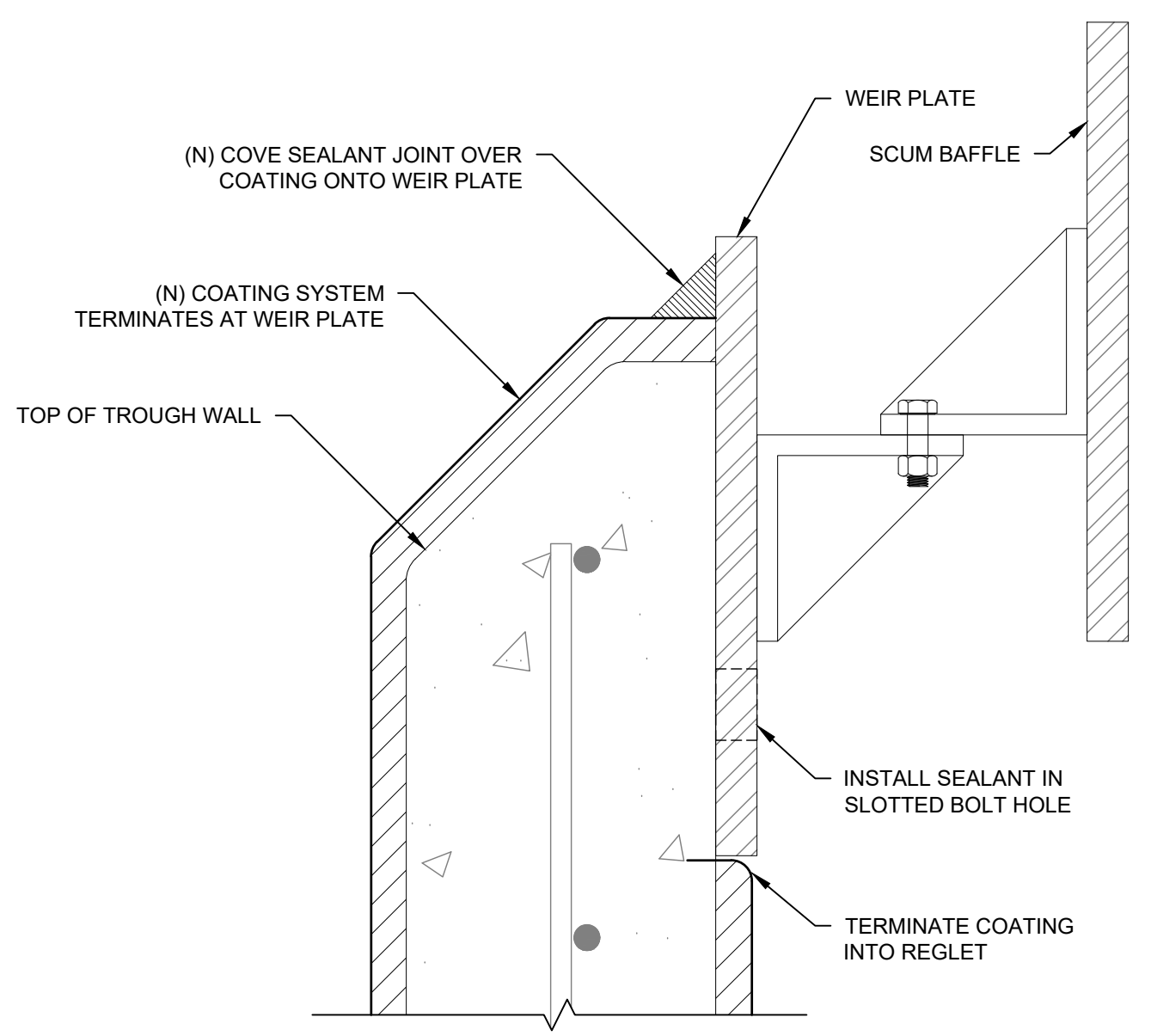
TERMINATE COATING INTO REGLET, TYP.

(N) COATING SYSTEM, TYP

(N) COVE SEALANT JOINT BELOW COATING

SEE OPP-HAND FOR SIM

CENTER SLUDGE PIT



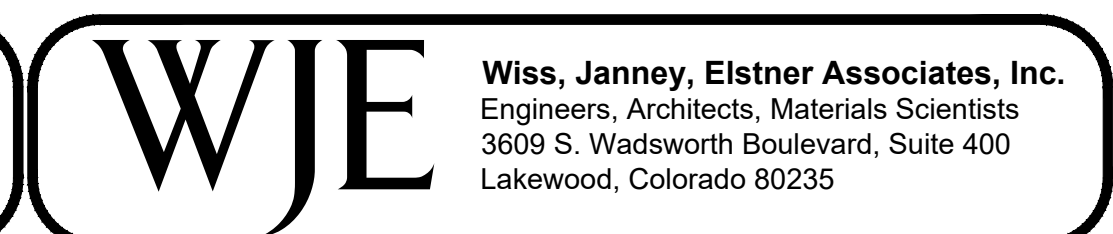
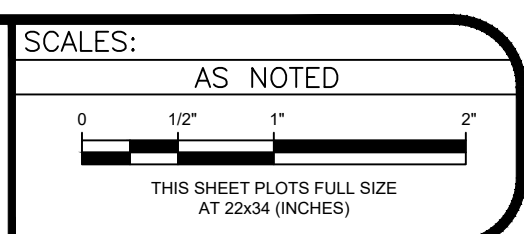
2 Weir Plate at Upper Trough Wall
SCALE: 3\"/>

1 Typical Clarifier Section
SCALE: 1\"/>

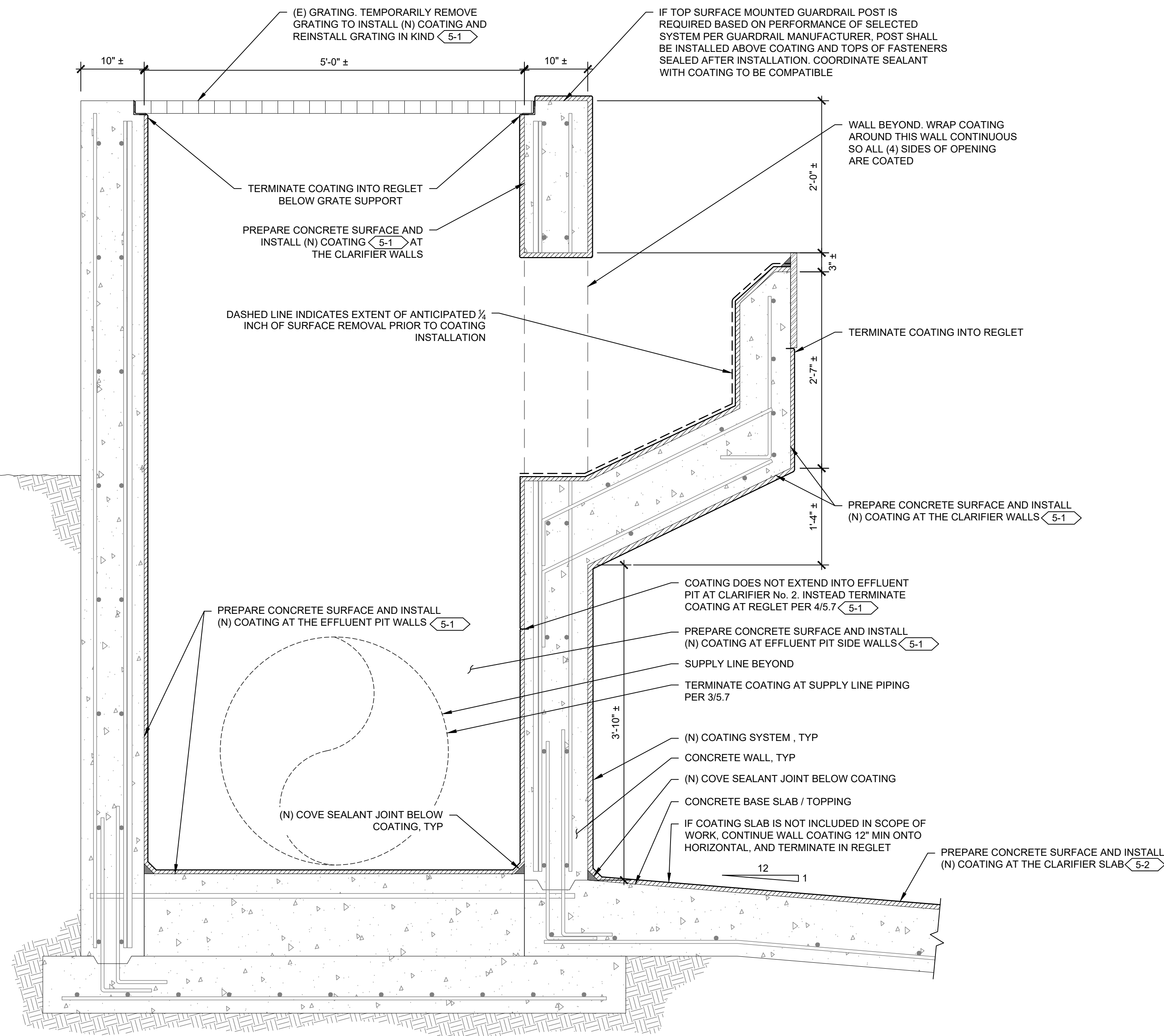
SHEET NOTES:

1. REFERENCE ORIGINAL DRAWINGS IV-12 TO IV-13, AND V-7 TO V-8 FOR ADDITIONAL INFORMATION.
2. MECHANICAL EQUIPMENT AND PLUMBING NOT SHOWN IN FULL. DO NOT DAMAGE, COORDINATE MOVEMENT OF EQUIPMENT WITH OWNER.
3. SKIMMER NOT SHOWN FOR CLARITY.

| REVISION | DESCRIPTION | DATE | DRAWN BY | DATE |
|------------|---------------------------|----------|----------|----------|
| REVISION A | CONCRETE COATING REVISION | 6/8/2021 | BRS/CRS | 04/07/21 |
| REVISION B | | | AGL/TMM | 04/07/21 |
| REVISION C | | | SWF | 04/07/21 |
| REVISION D | | | IMM | 04/07/21 |



PRIMARY CLARIFIER SECTION AND DETAILS



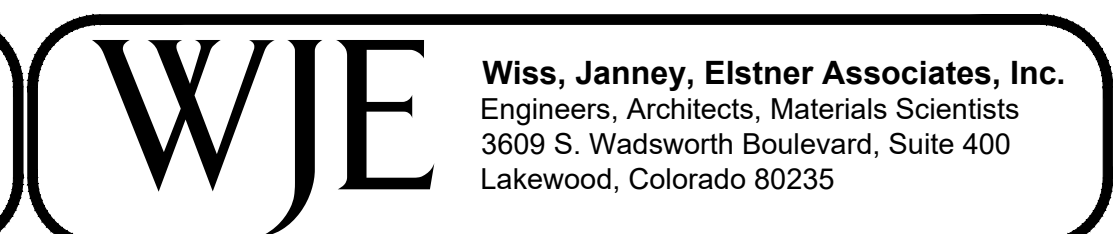
1 Typical Effluent Pit Section
SCALE: 1" = 1'-0"

- SHEET NOTES:**
1. REFERENCE ORIGINAL DRAWINGS IV-12 TO IV-13, AND V-7 TO V-8 FOR ADDITIONAL INFORMATION.
 2. MECHANICAL EQUIPMENT AND PLUMBING NOT SHOWN IN FULL. DO NOT DAMAGE, COORDINATE MOVEMENT OF EQUIPMENT WITH OWNER.

| REVISION | DESCRIPTION | DATE | DRAWN BY | DATE |
|-------------------|---------------------------|----------|----------|----------|
| REVISION Δ | CONCRETE COATING REVISION | 6/8/2021 | BRS/CRS | 04/07/21 |
| REVISION Δ | | | AGL/TMM | 04/07/21 |
| REVISION Δ | | | SWF | 04/07/21 |
| REVISION Δ | | | TMM | 04/07/21 |

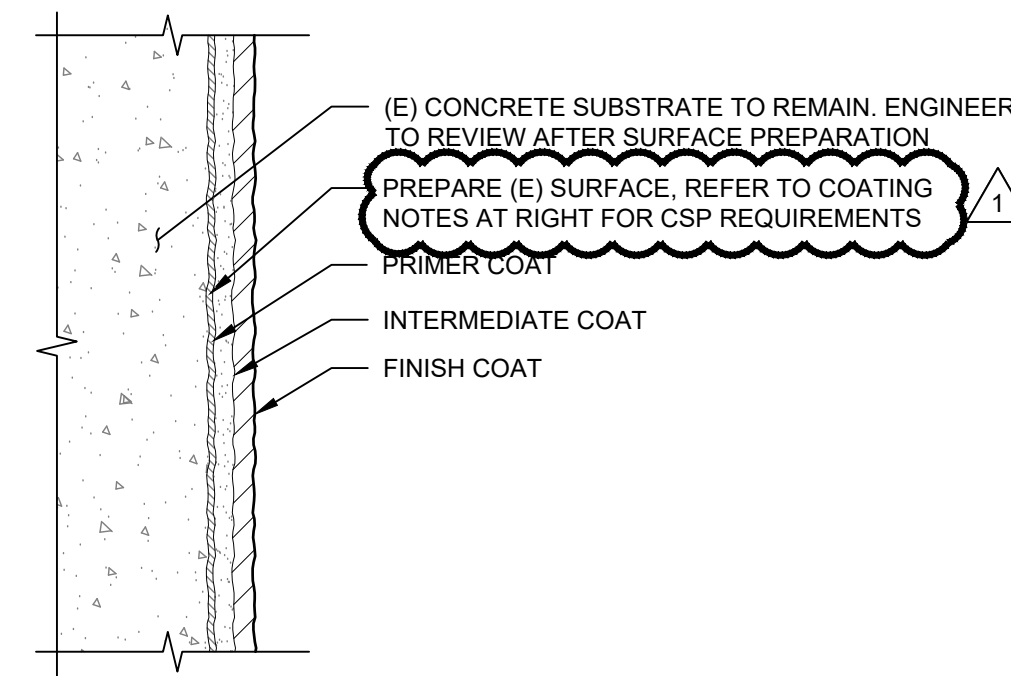
SCALES:
AS NOTED

THIS SHEET PLOTS FULL SIZE AT 22x34 (INCHES)

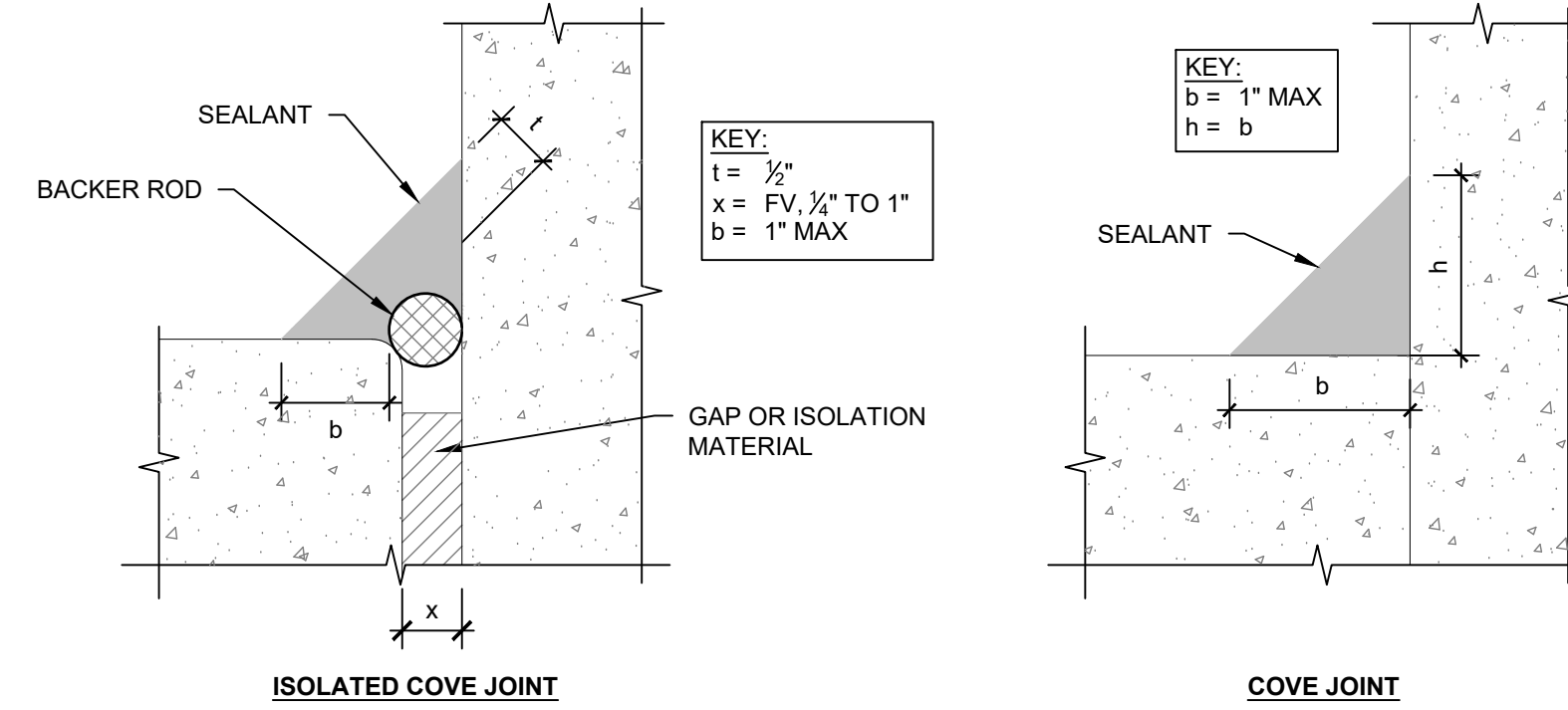


TYPICAL COATING NOTES:
 THESE NOTES SHALL APPLY TO ALL COATING WORK UNLESS OTHERWISE NOTED ON A SPECIFIC DETAIL. REFERENCE THE SPECIFICATION SECTION 09 97 23 FOR ADDITIONAL INFORMATION.

1. COATING TERMINATIONS AND DETAILS AT JOINTS, CRACKS AND SIMILAR SHALL CONFORM TO THE DETAILS HEREIN, OR MANUFACTURER DETAILS FOR ITEMS NOT SHOWN. CONFIRM REQUIREMENTS OF DETAILS AND THE REQUIREMENTS HEREIN WITH COATING MANUFACTURER. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN THESE DRAWINGS AND MANUFACTURER TYPICAL DETAILS OR WRITTEN INSTRUCTIONS. ENGINEER SHALL DETERMINE WHICH REQUIREMENT(S) APPLY. DO NOT PROCEED WITH WORK UNTIL RECEIVING DIRECTION FROM ENGINEER.
2. SURFACE PREPARATION:
 - 2.1. BASE BID
 - 2.1.1. PREPARE WALL SURFACES TO PROFILE OF CSP 3 TO 4.
 - 2.1.2. PREPARE SLAB SURFACES TO PROFILE OF CSP 5 TO 7.
 - 2.2. ALTERNATE BID
 - 2.2.1. PREPARE WALL AND SLAB SURFACES TO PROFILE OF CSP 4 TO 6.
3. PREPARE METAL CONNECTIONS IN ACCORDANCE WITH COATING MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR THIS SERVICE ENVIRONMENT. STEEL SHALL MEET SSPC-SP6 MINIMUM.
4. UNIFORMLY CLEAN AND INCREASE CONCRETE SURFACE POROSITY BY ABRASIVE BLAST PER ASTM D4259.
5. REMOVE LOOSE MATERIAL AND ANY NEAR SURFACE CONCRETE WITH DEGRADED PASTE AND CLEAN CONCRETE SURFACES PER ASTM D4258.
6. INSTALL JOINT SEALANT (UNLESS SPECIFICALLY INDICATED OR SHOWN TO BE INSTALLED OVER/AFTER COATING).
7. CONFIRM MOISTURE LEVELS ARE BELOW ALLOWABLE LIMITS.
8. INSTALL COATING SYSTEM PER MANUFACTURER'S DIRECTIONS.



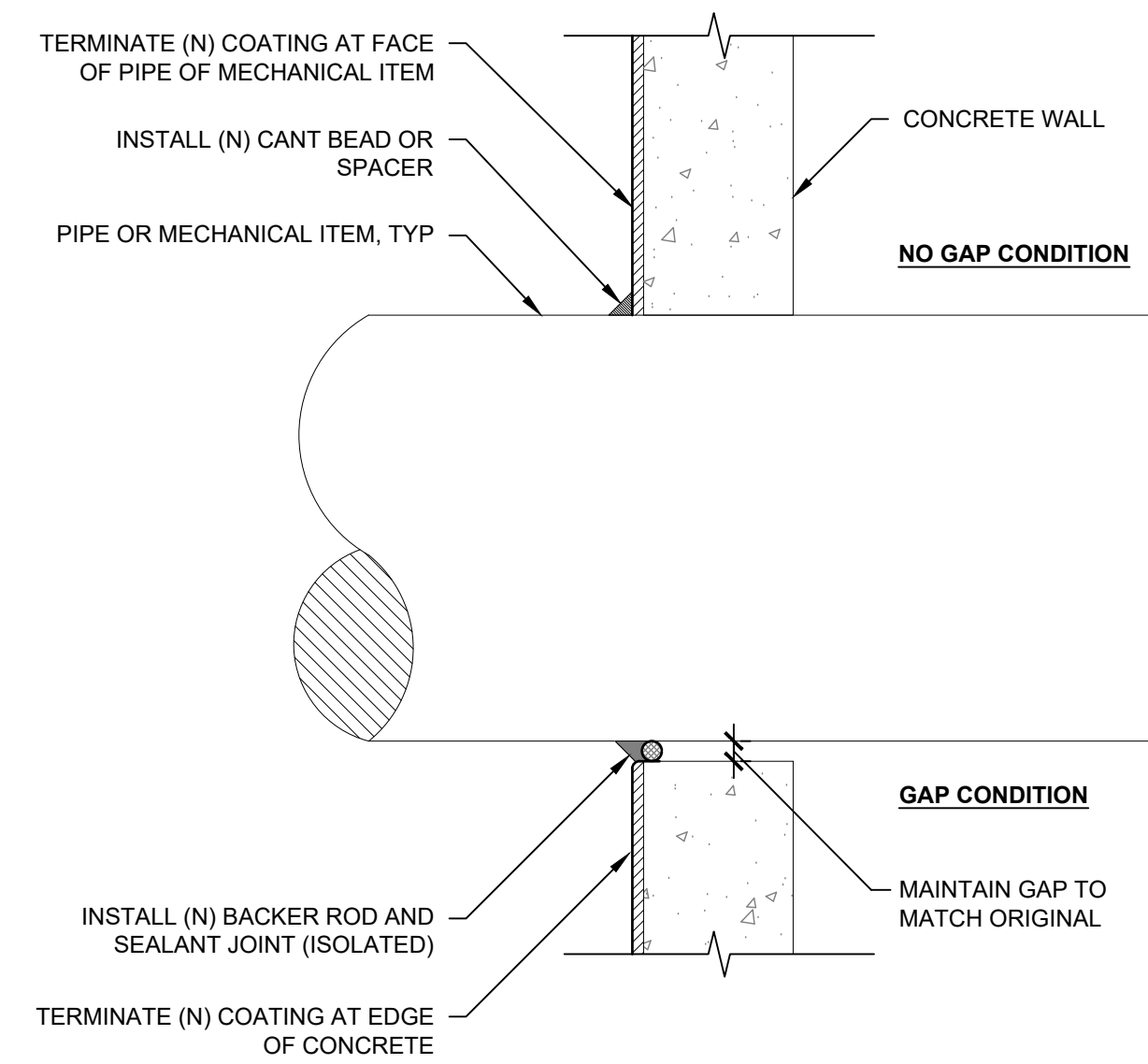
1 Typical Coating Detail 5-1 5-2
 SCALE: NOT TO SCALE



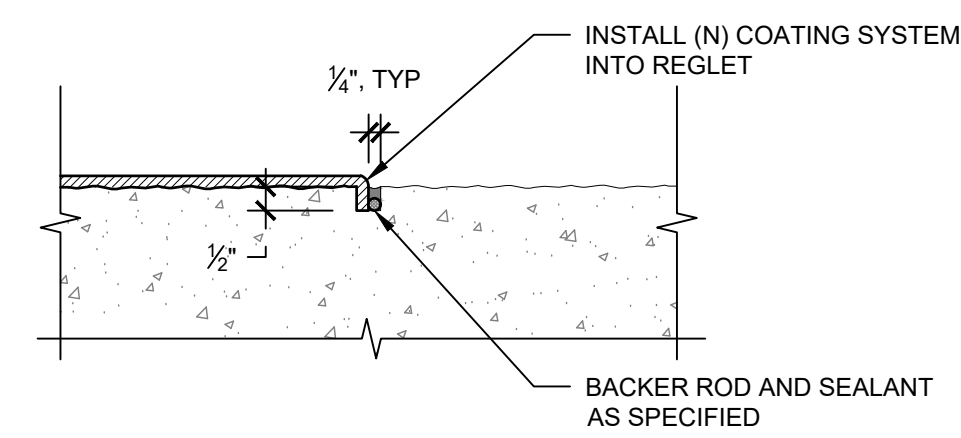
TYPICAL SEALANT NOTES:
 THESE NOTES SHALL APPLY TO ALL SEALANT JOINT WORK UNLESS NOTED OTHERWISE ON A SPECIFIC DETAIL. THESE NOTES SERVE TO SUPPLEMENT THE SPECIFICATIONS. REFERENCE SPECIFICATION SECTION 07 92 00 FOR ADDITIONAL INFORMATION.

1. ABBREVIATIONS: h = SEALANT HEIGHT, t = SEALANT THICKNESS, b = BOND LINE, AND x = JOINT GAP.
2. REMOVE ALL GROUT, SEALANT, BACKER ROD, BOND BREAKER TAPE, ETC. IN JOINT OR CRACK.
3. SLIGHTLY GRIND THE CONCRETE SURFACES WITHIN THE JOINT WITH A GRINDING WHEEL HAVING A PROFILE APPROXIMATELY THE SAME AS THE JOINT.
4. PROVIDE PROPER JOINT DEPTH PER DETAILS.
5. CLEAN STEEL OF RUST AND PROVIDE STEEL SURFACE EQUAL TO SSPC SP3, POWER TOOL CLEANING.
6. AFTER GRINDING, CLEAN DEBRIS FROM THE JOINT USING A STIFF BRUSH AND OIL-FREE COMPRESSED AIR. VACUUM THE JOINT AND SURFACES WITHIN 6 INCHES OF JOINT.
7. INSTALL PRIMER ON ALL SURFACES. POROUS SURFACES SHALL BE PRIMED REGARDLESS OF MANUFACTURER RECOMMENDATIONS TO EXCLUDE PRIMER.
8. INSTALL BACKER ROD OR BOND BREAKER TAPE WHERE INDICATED AND SEALANT PER MANUFACTURER'S WRITTEN RECOMMENDATIONS AND THESE DOCUMENTS.
9. CONFIRM REQUIREMENTS OF SEALANT MANUFACTURER PRIOR TO SUBMITTING BID. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN THESE DOCUMENTS AND MANUFACTURER'S TYPICAL DETAILS, WRITTEN RECOMMENDATIONS, OR INSTRUCTIONS. ENGINEER SHALL DETERMINE WHICH APPLY.

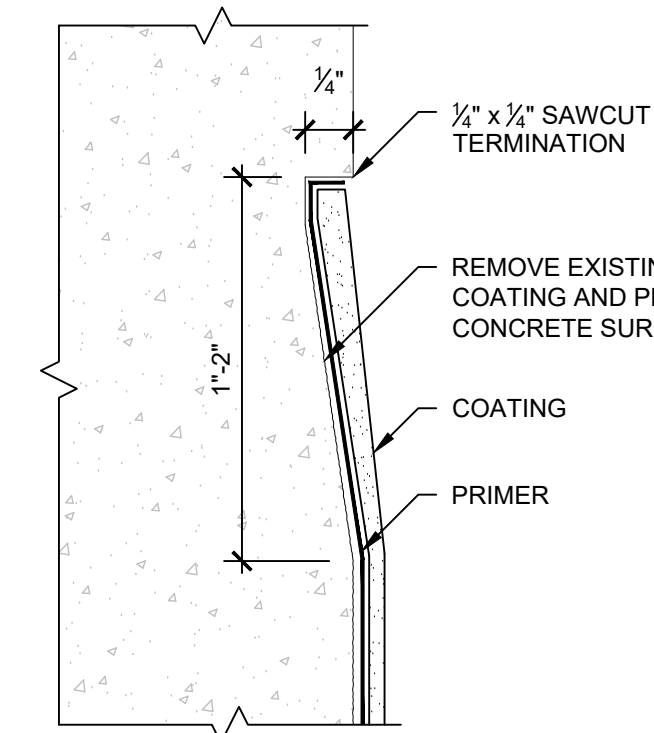
2 Typical Joint Sealant Details and Notes 5-1 5-2
 SCALE: NOT TO SCALE



3 Typical Coating Termination at Pipe or Mechanical Item 5-1 5-2
 SCALE: 3" = 1'-0"



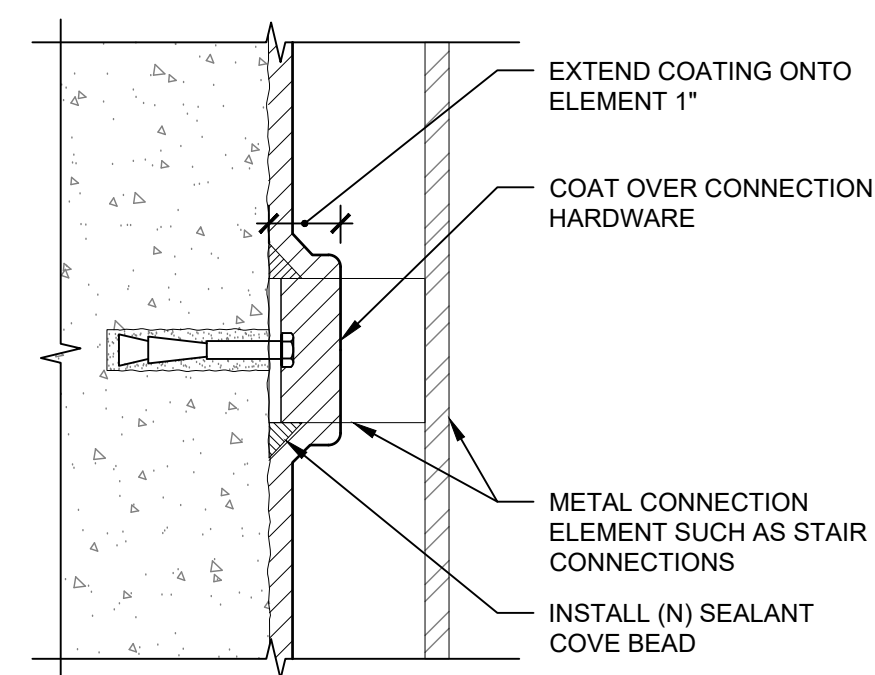
4A Typical Coating Reglet Termination 5-1 5-2
 SCALE: 3" = 1'-0"



DETAIL NOTES:

1. SAW CUT EDGE AND TAPER CONCRETE REMOVAL ACROSS 1" TO 2" TO SET EDGE OF COATING FLUSH WITH SURFACE OF CONCRETE (I.E. NO EXPOSED COATING LIP AT LEADING EDGE OF COATING).
2. THE 1/2"x1/2" SAW-CUT AND TAPERED REMOVAL SHALL BE DRIED AND CLEANED OF ALL DUST AND RESIDUE PRIOR TO PRIMING.
3. AREAS NOT TO BE COATED, BUT WHICH ARE ADJACENT TO A LEADING EDGE, SHALL BE NEATLY TAPED OFF AND PROTECTED FROM PRIMER AND TOPCOAT MATERIAL OR OVERSPRAY.

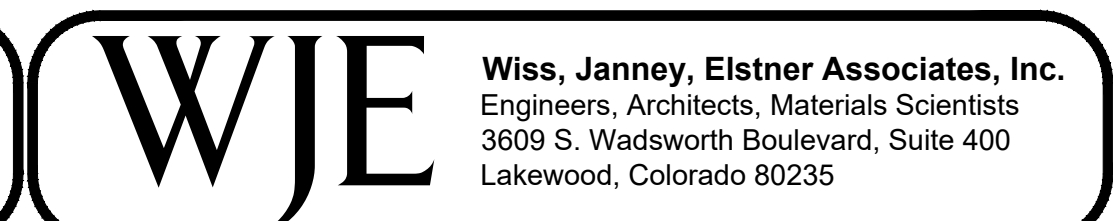
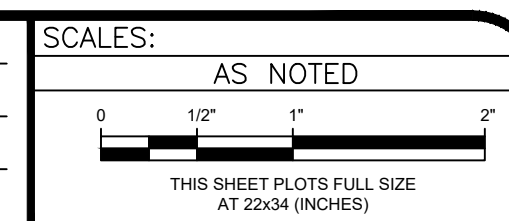
4B Alternate Coating Termination 5-1 5-2
 SCALE: 1'-0" = 1'-0"



5 Typical Coating Termination at Ladder and Misc. Conn. 5-1 5-2
 SCALE: 3" = 1'-0"

| REVISION | DESCRIPTION | DATE |
|------------|---------------------------|----------|
| REVISION A | CONCRETE COATING REVISION | 6/8/2021 |
| REVISION B | | |
| REVISION C | | |
| REVISION D | | |

| | | | |
|-------------|---------|------|----------|
| DRAWN BY | BRS/CRS | DATE | 04/07/21 |
| DESIGNED BY | AGL/TMM | DATE | 04/07/21 |
| CHECKED BY | SWF | DATE | 04/07/21 |
| APPROVED BY | IMM | DATE | 04/07/21 |



PRIMARY CLARIFIER
 DETAILS