



SETTLING POND PROJECT

MONTANA FISH, WILDLIFE & PARKS

FWP # 7193123

for

GIANT SPRINGS FISH HATCHERY

4801 Giant Springs Road

Great Falls, MT 59405

406-452-5734

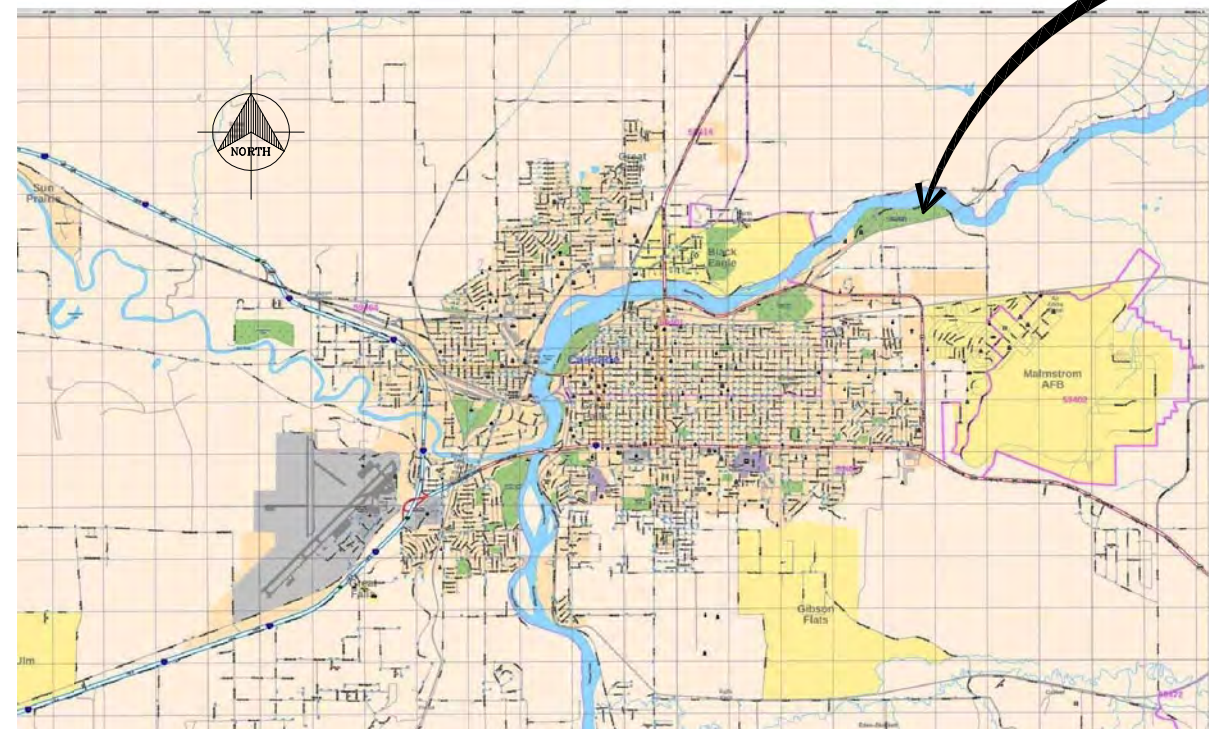
VERIFY SCALE
THESE PRINTS MAY HAVE BEEN REDUCED
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ONE INCH ON THE ORIGINAL DRAWING



PROJECT LOCATION

| CLIENT | ENGINEER |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Montana FWP Joey Renenger, PE Project Manager Design and Construction PO Box 200701 Helena, MT 59620-0701 406.841.4007 joey.renenger@mt.gov | John Schlegelmilch, PE Consulting Structural Engineer PO Box 71 Divide, MT 59727 406.585.7442 mtstructural@gmail.com |

PROJECT SITE



Vicinity Map - Great Falls

DRAWING INDEX

| SHEET NO. | SHEET TITLE |
|-----------|-----------------------------|
| 1 | COVER SHEET |
| 2 | OVERAL PROJECT PLAN |
| 3 | BASIN SITE PLAN |
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| 5 | BASIN INLET PLAN & PROFILE |
| 6 | BASIN OUTLET PLAN & DETAILS |
| 7 | BASIN SECTIONS & DETAILS |
| 8 | CONCRETE DETAILS |
| 9 | SITE GRADING & RESTORATION |

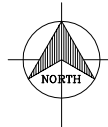
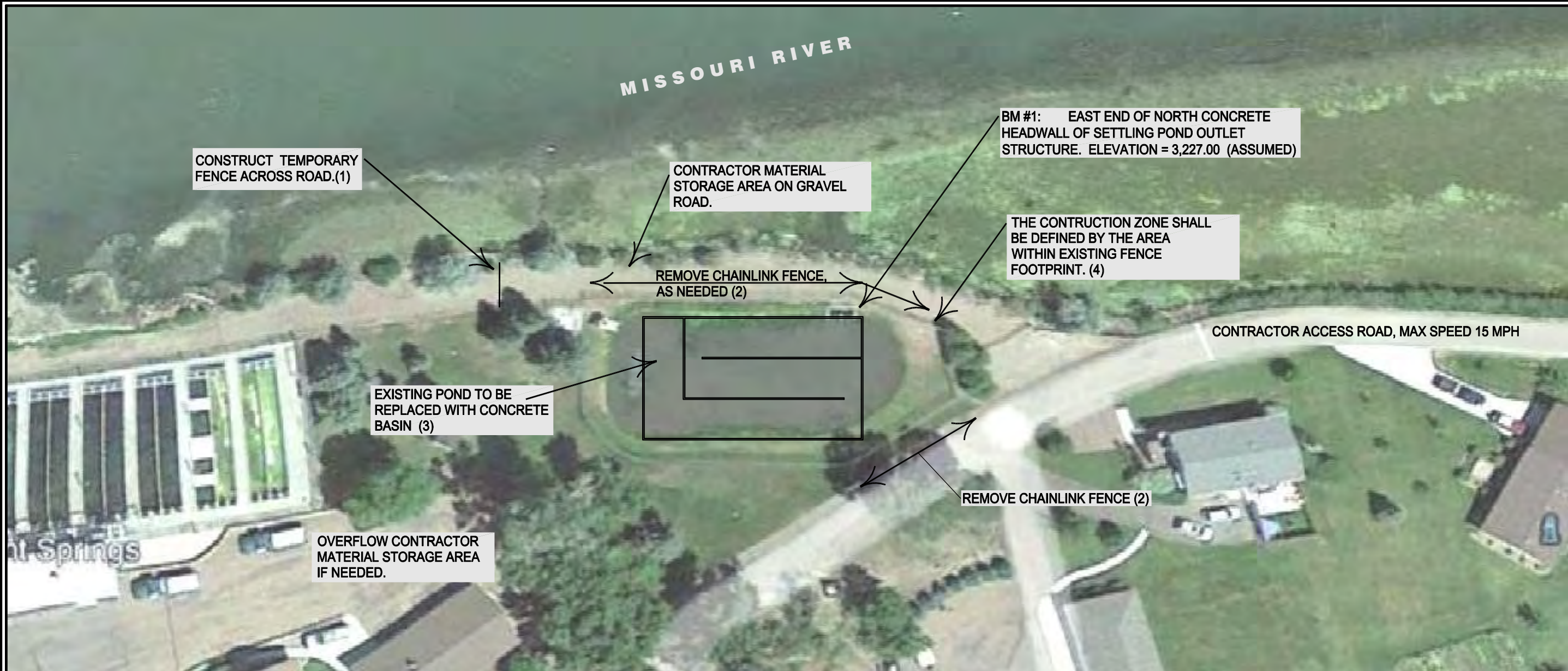
| REVISION | DATE | BY | APPR. |
|------------------------|---------|-----|-------|
| SCHEMATICS | 3-23-22 | JKS | JKS |
| FINAL DESIGN REVIEW | 5-04-22 | JKS | JKS |
| CONSTRUCTION DOCUMENTS | 5-16-22 | JKS | JKS |

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|-------------|--------------------|-------------|----------|
| DESIGNED BY | John Schlegelmilch | DATE | May 2022 |
| DRAWN BY | JKS | PROJECT NO. | |
| CHECKED BY | JKS | FILE | |

PROJECT TITLE
FWP # 7192123
Giant Springs Hatchery
Settling Pond Replacement
Great Falls, Montana

SHEET TITLE
COVER SHEET
AND TITLE

SHEET
1
 OF 9



A CONSTRUCTION SITE PLAN

SCALE: NTS RE: _____

BENCHMARK DATA:

BM #1: EAST END OF NORTH CONCRETE HEADWALL OF SETTLING POND OUTLET STRUCTURE. ELEVATION = 3,227.00 (ASSUMED)

NOTES:

1. CONTRACTOR SHALL ERECT TEMPORARY FENCE ON ACCESS ROAD NORTH OF POND. THE TEMPORARY FENCE SHALL COMMENCE FROM THE FENCE ALONG THE SOUTH EDGE OF THE ROAD AND EXTEND NORTH ACROSS THE ROAD TO THE TOP OF THE BANK. THE FENCE SHALL BE A MINIMUM OF 4.0 FEET IN HEIGHT AND SUPPORTED BY BURIED OR DRIVEN STEEL POSTS. FENCING SHALL MEET ALL REQUIREMENTS OF OSHA FOR SAFETY FENCING TO PROTECT THE PUBLIC. CONTRACTOR TO SUBMIT PLAN AND DETAILS OF TEMPORARY FENCE FOR APPROVAL PRIOR TO ERECTION.
2. SUGGESTED LOCATIONS FOR REMOVAL OF CHAINLINK FENCING ARE SHOWN TO ACCESS THE CONSTRUCTION SITE. THE CONTRACTOR SHALL DETERMINE THE AMOUNT OF FENCE TO BE REMOVED TO EFFECTIVELY CONDUCT THE PROJECT WORK. FENCING AND POST REMOVAL AND STORAGE SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO THE COMPONENTS. EXISTING CORNER POSTS SHALL NOT BE REMOVED. ALL RESET POSTS SHALL BE IN CONCRETE. CONTRACTOR TO SUBMIT PLAN FOR REMOVAL LOCATIONS.
3. PRIOR TO CONSTRUCTION, HATCHERY PERSONNEL SHALL BYPASS INFLOW INTO POND, FOLLOWED BY GRADUAL LOWERING OF WATER LEVEL. THE CONTRACTOR SHALL NOT PROCEED WITH REMOVAL OF POND BIOSOLIDS UNTIL SPECIFICALLY PERMITTED BY HATCHERY PERSONNEL.
4. CONSTRUCTION WORK SHALL BE CONFINED WITHIN THE FENCE SURROUNDING THE POND. INCIDENTAL DAMAGE TO LAWNS, AND GRAVEL AND PAVED AREAS FROM CONSTRUCTION ACTIVITIES INCLUDING ACCESSING THE CONSTRUCTION ZONE SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.

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SHEET TITLE
CONSTRUCTION
SITE PLAN

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State of Montana
 License No. 6088 E
 Professional Engineer

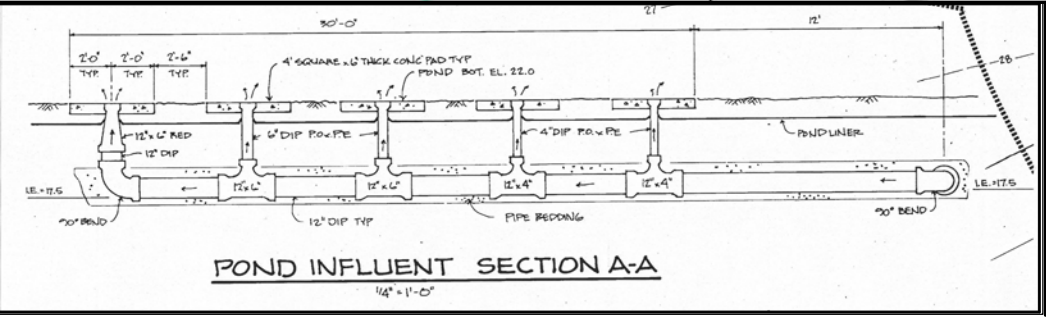
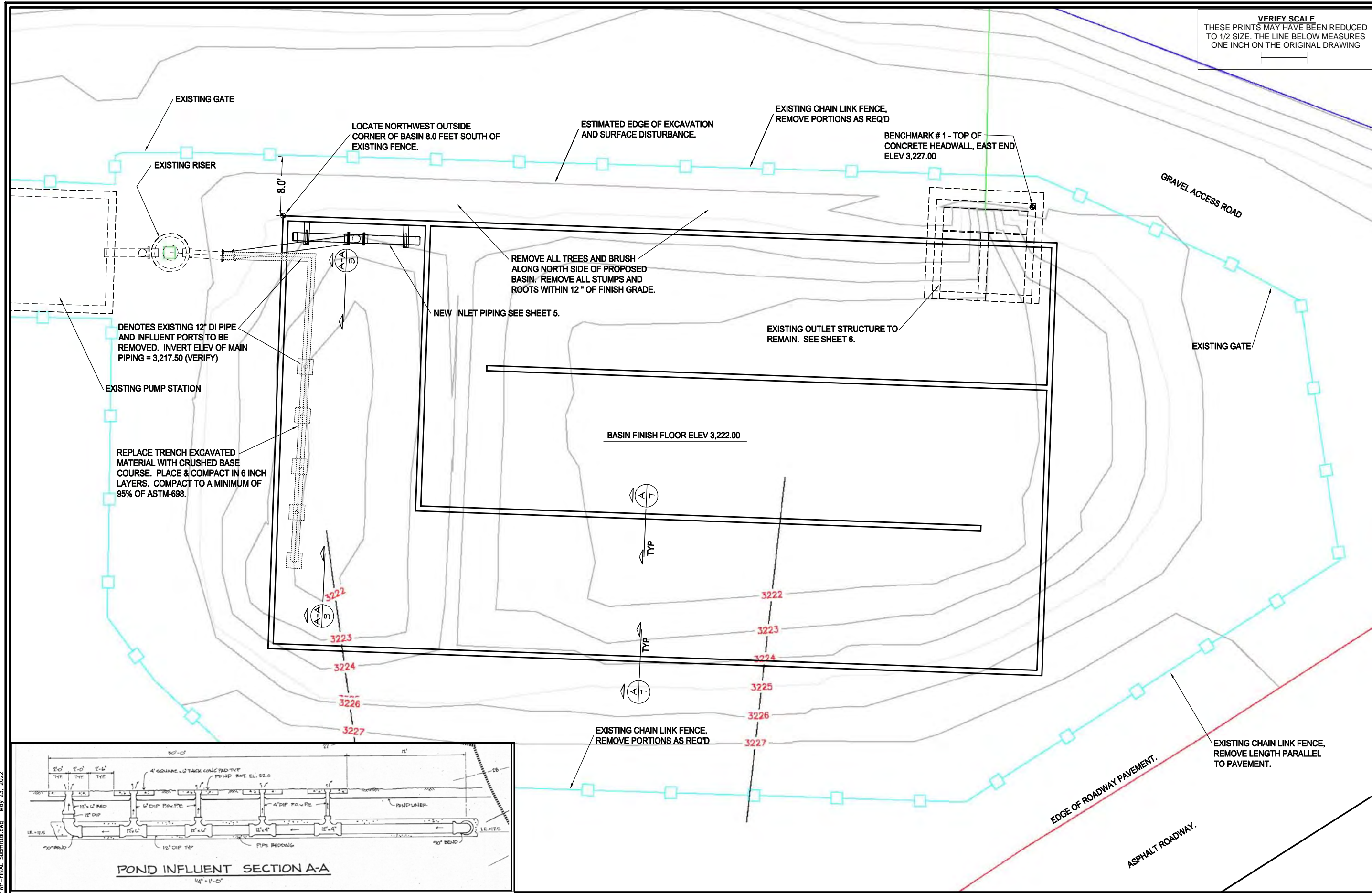
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Settling Pond Replacement
 Great Falls, Montana

SHEET TITLE
BASIN SITE PLAN

SHEET
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 OF 9



NOTE: TAKEN FROM DESIGN DRWGS. NOT GUARANTEED TO BE ACCURATE. FOR CONTRACTOR INFORMATION.

EXISTING PIPING TO BE REMOVED
 SCALE: 1" = 5'-0" RE: _____

A **BASIN SITE PLAN**
 SCALE: 1" = 5'-0" 1/27 RE: _____



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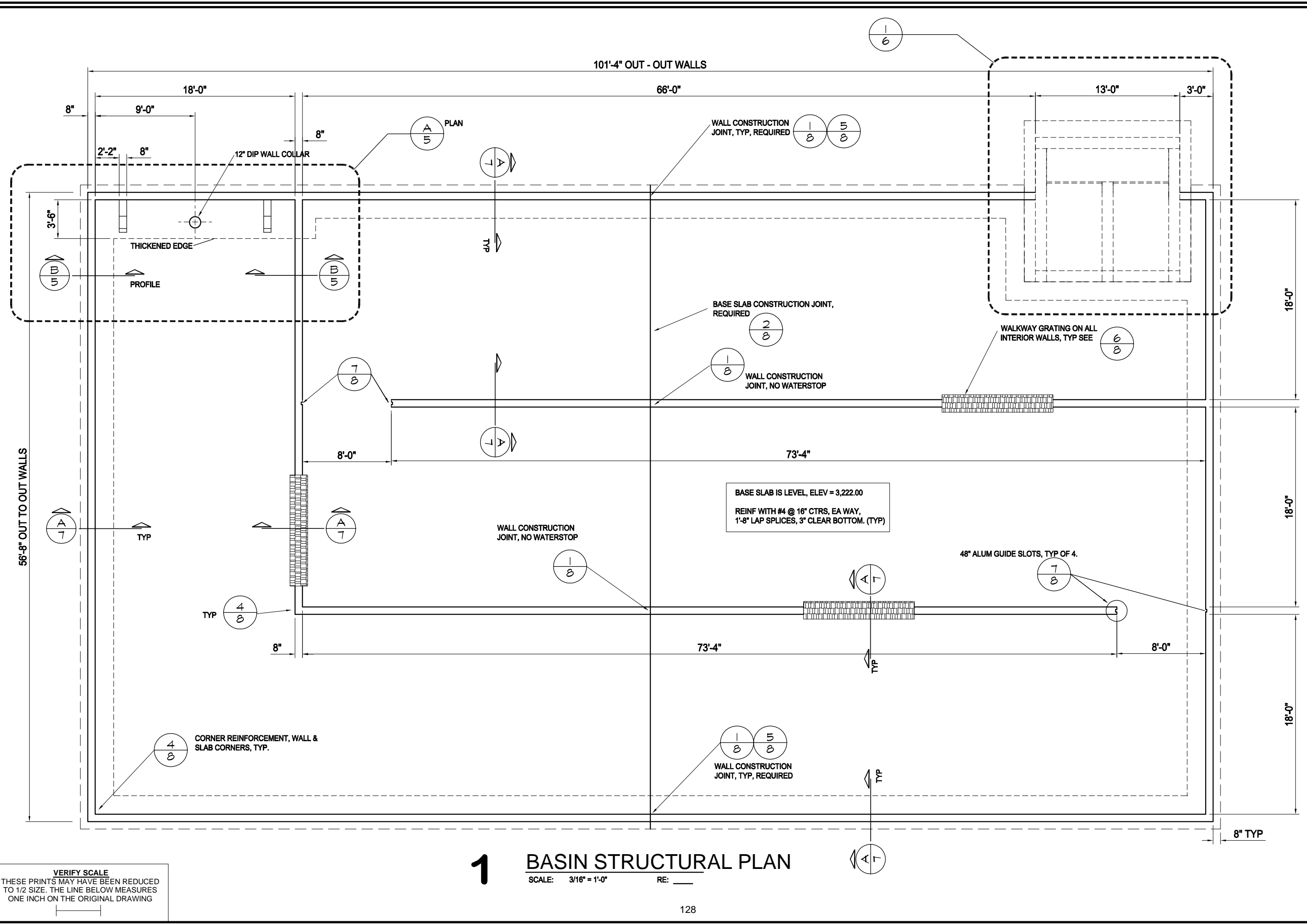
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Great Falls, Montana

SHEET TITLE
BASIN STRUCTURAL
PLAN

SHEET
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VERIFY SCALE
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1 **BASIN STRUCTURAL PLAN**
 SCALE: 3/16" = 1'-0" RE: _____

State of Montana
 License No. 6088 E
 Professional Engineer

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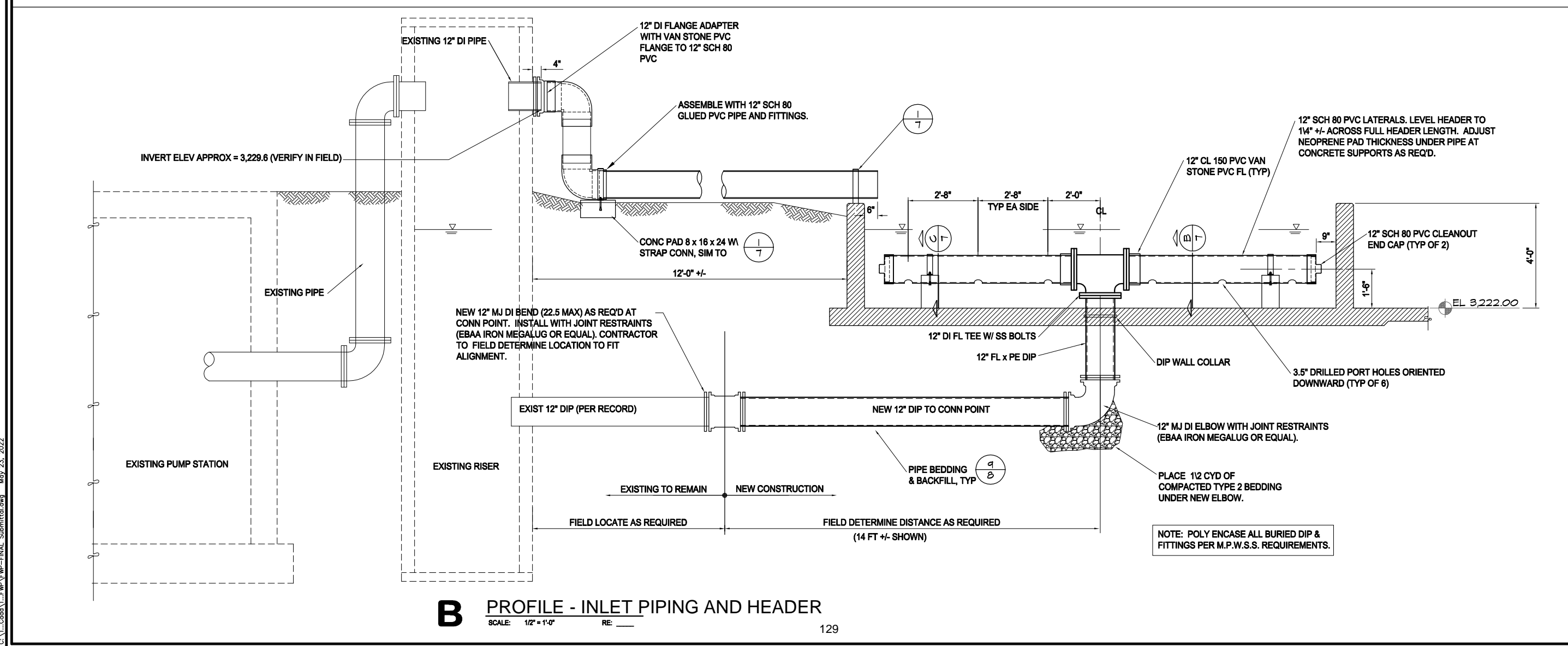
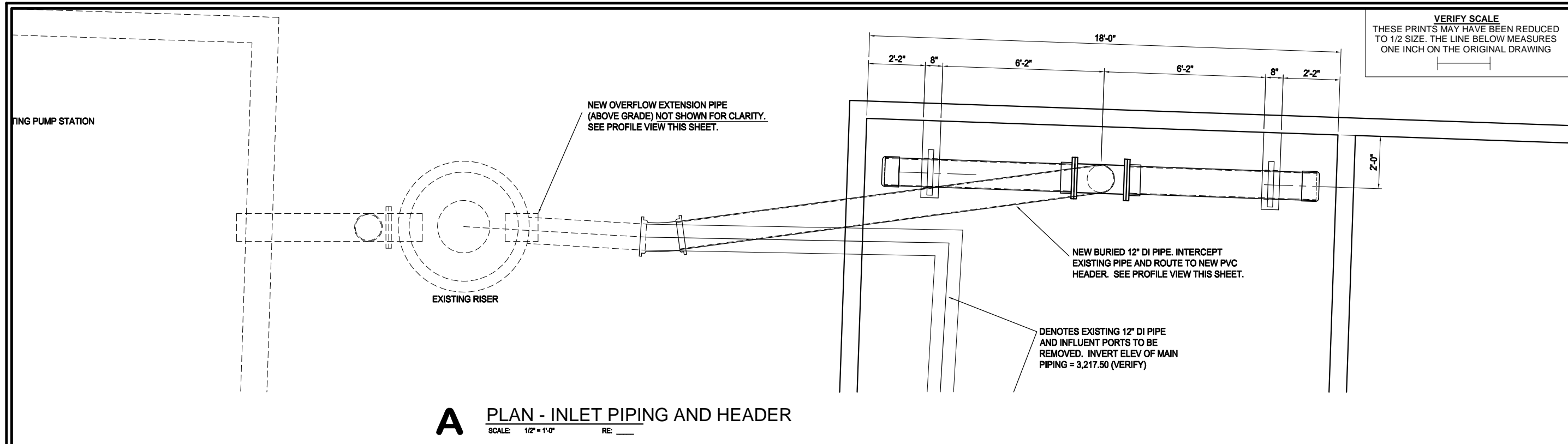
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SHEET TITLE
BASIN INLET
PLAN & PROFILE

SHEET
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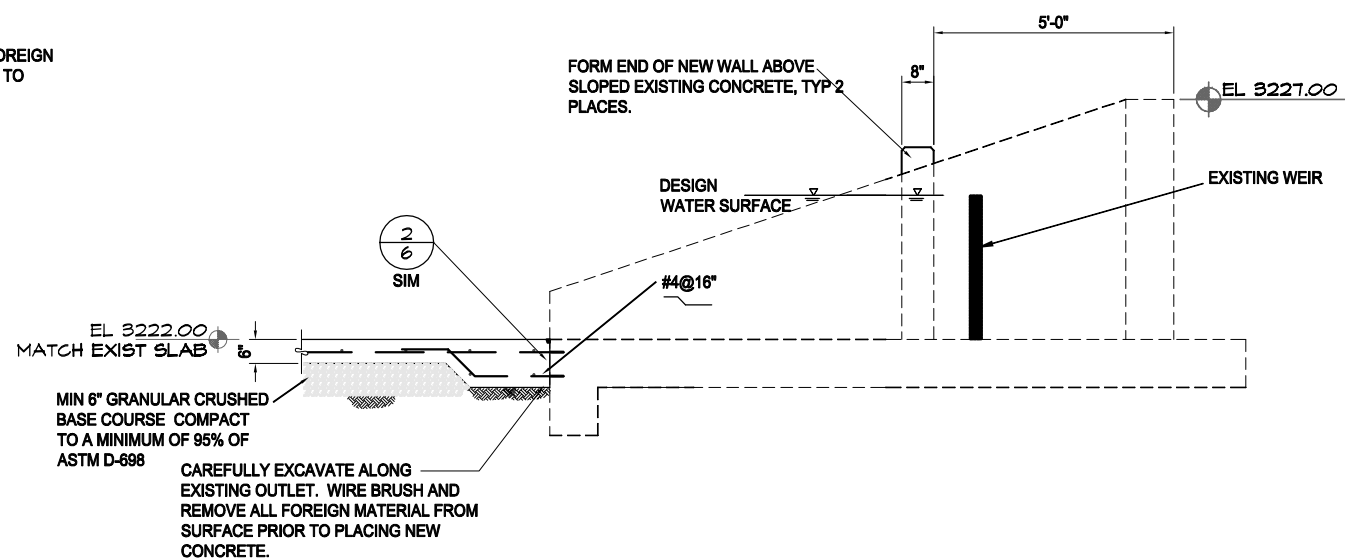
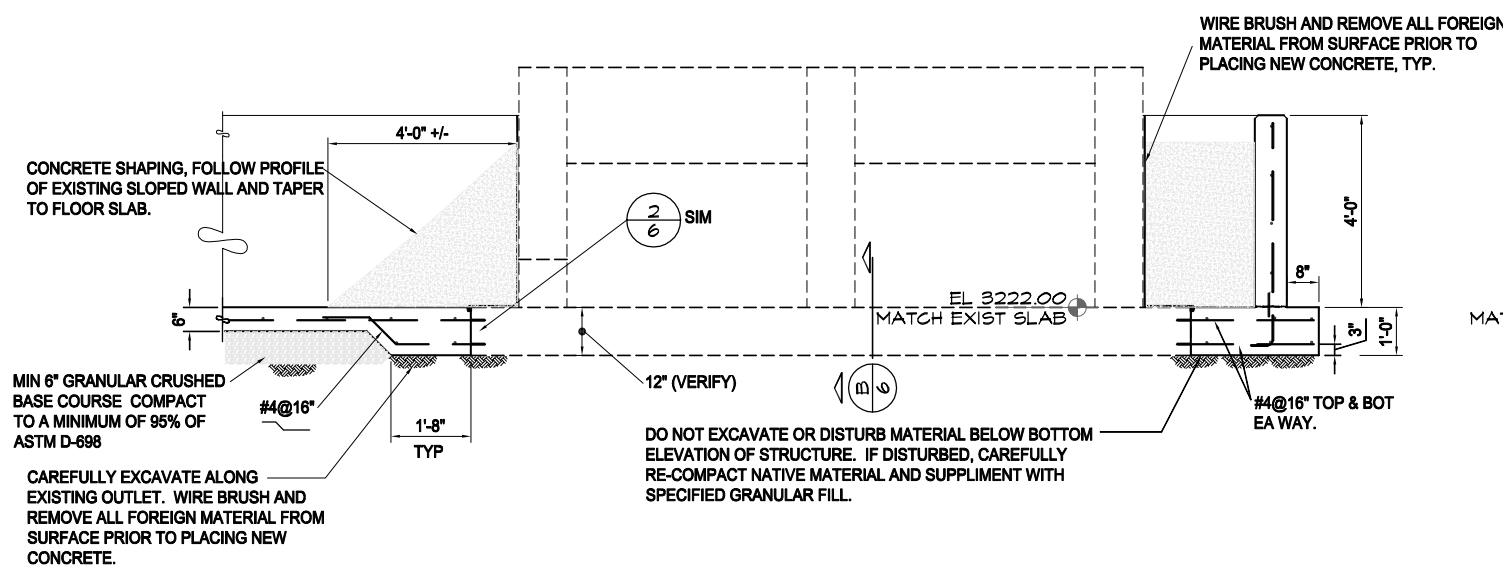
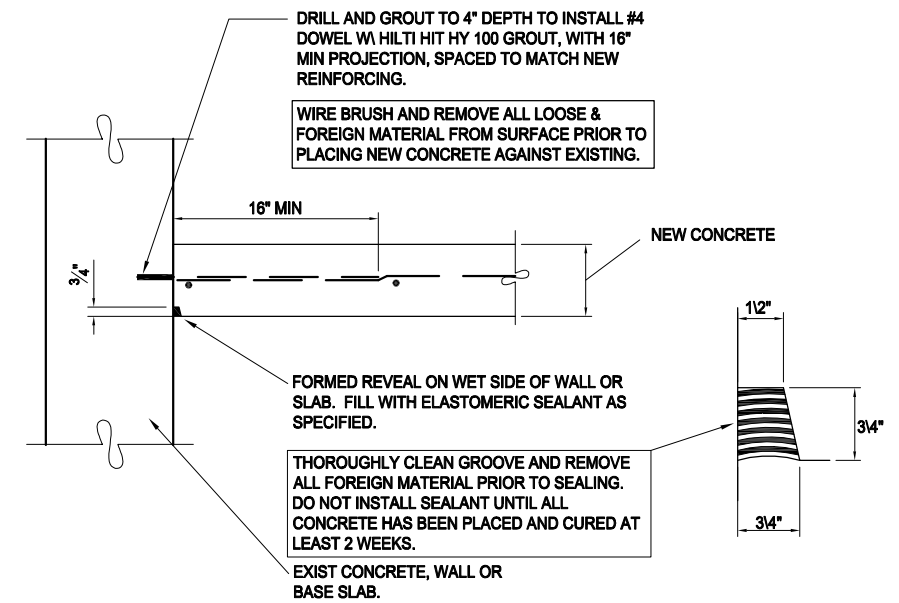
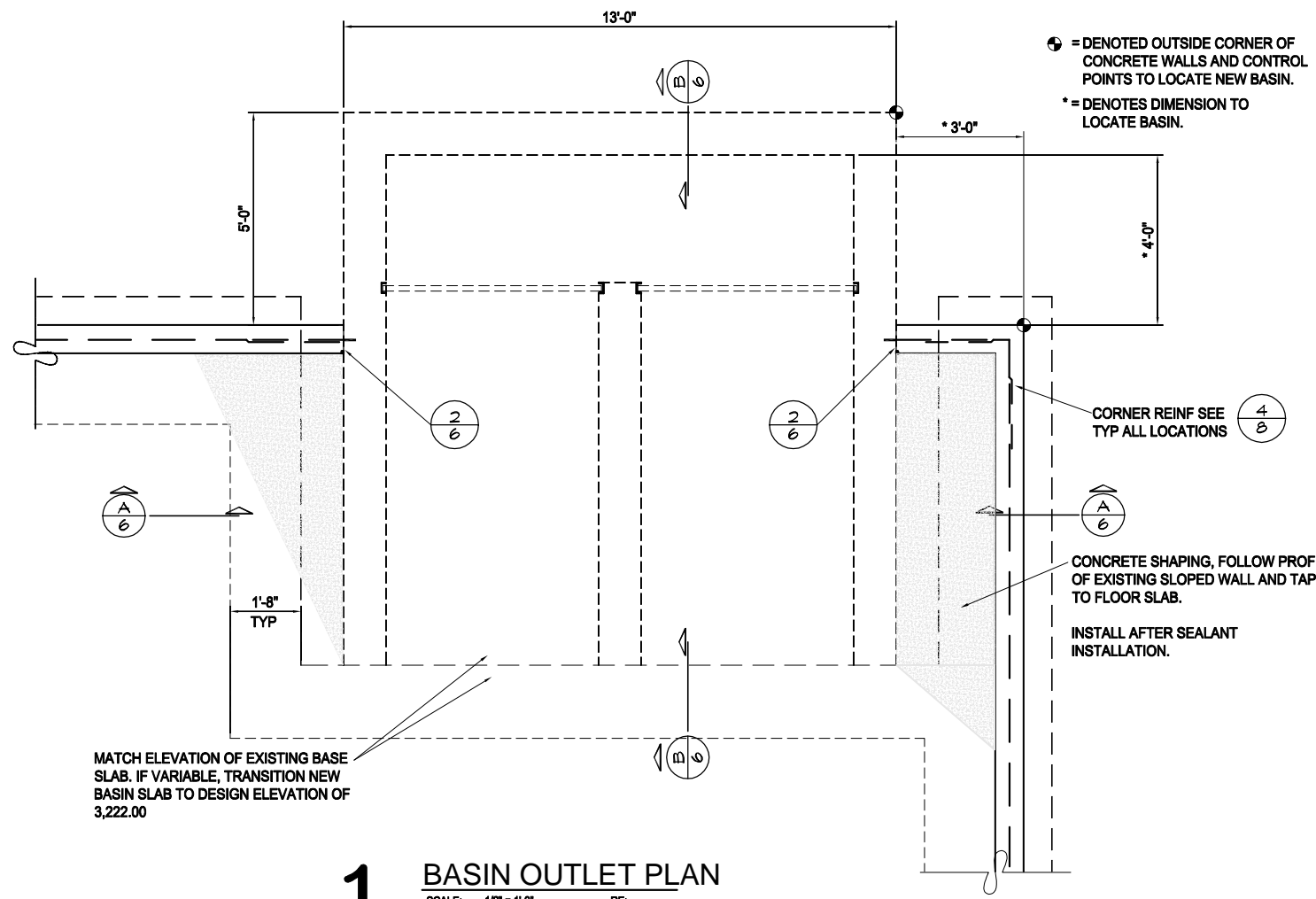
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PROJECT TITLE
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Settling Pond Replacement
 Great Falls, Montana

SHEET TITLE
BASIN OUTLET
DETAILS

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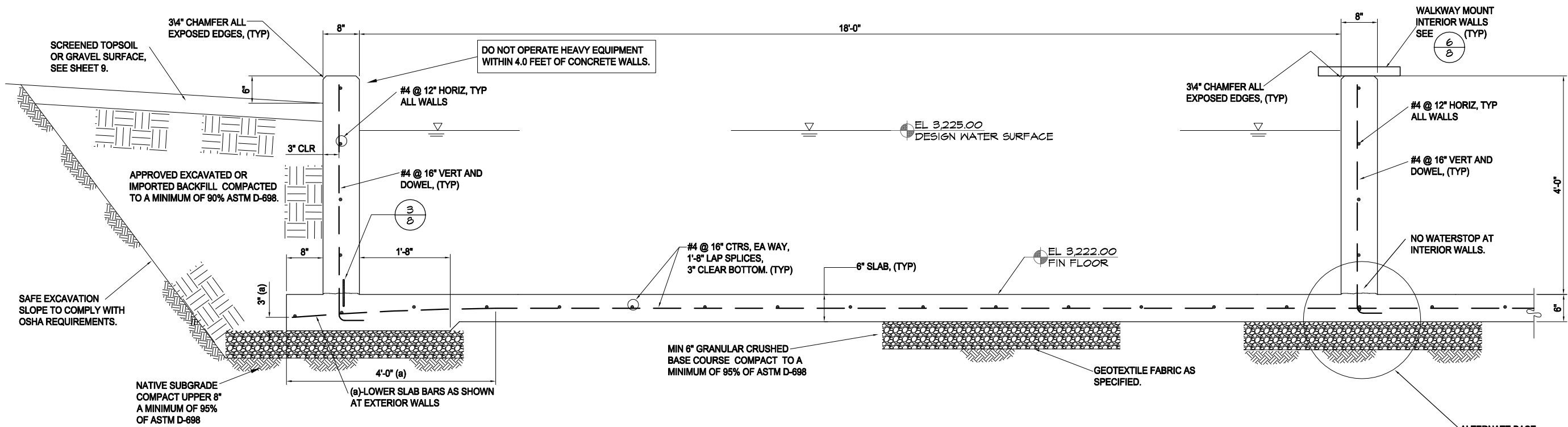
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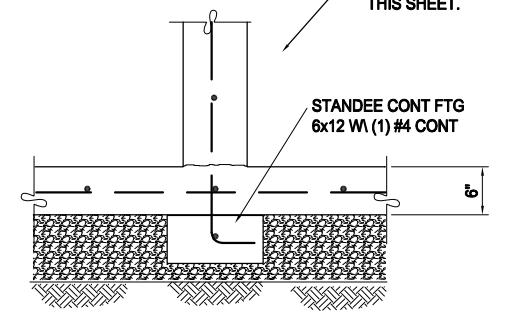
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SHEET TITLE
BASIN STRUCTURAL
DETAILS

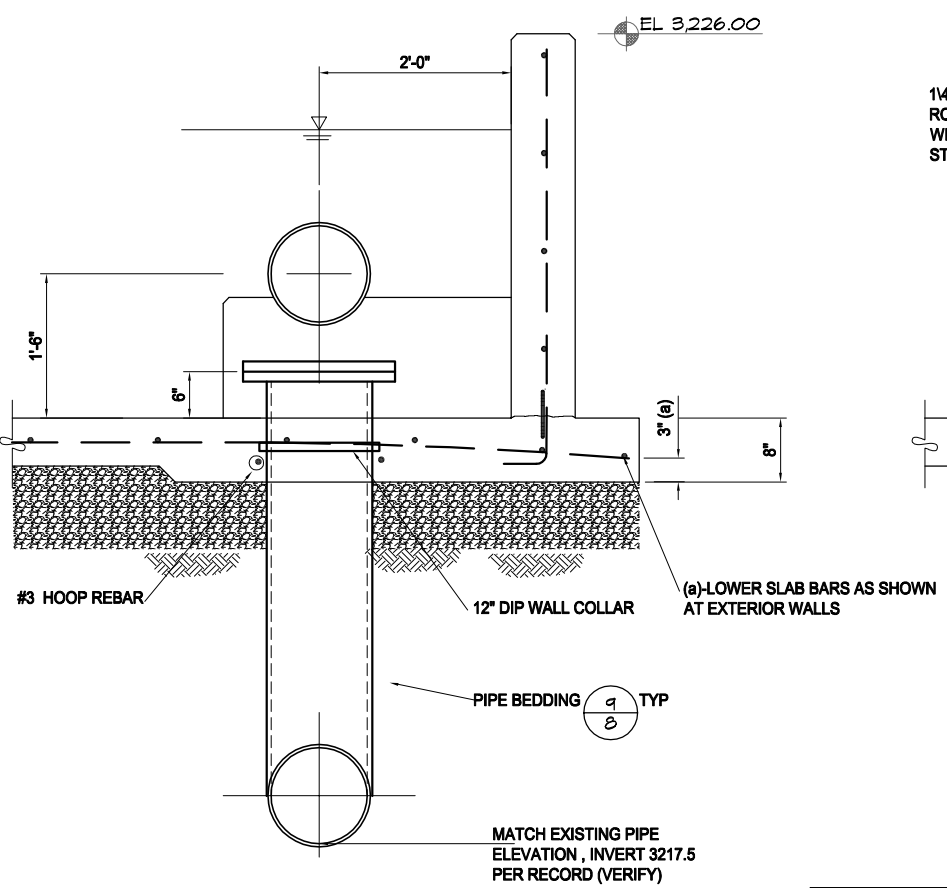
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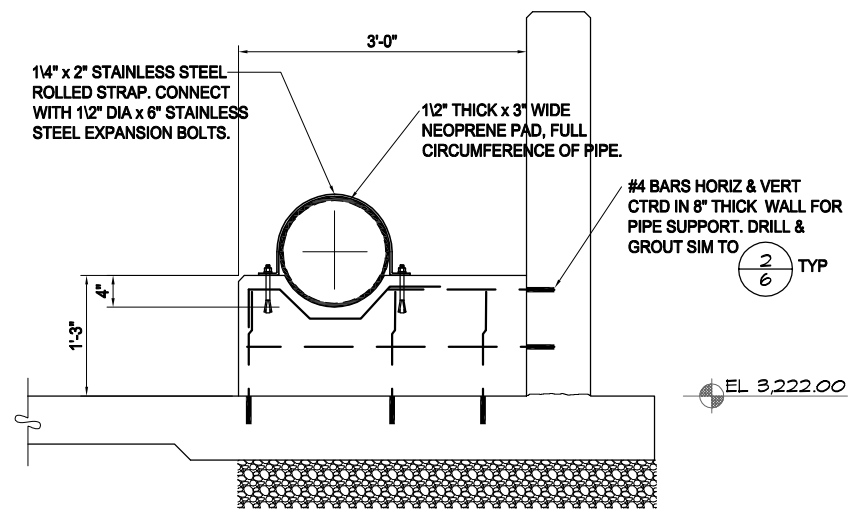
A TYPICAL BASIN SECTION
 SCALE: 1" = 1'-0" RE: _____



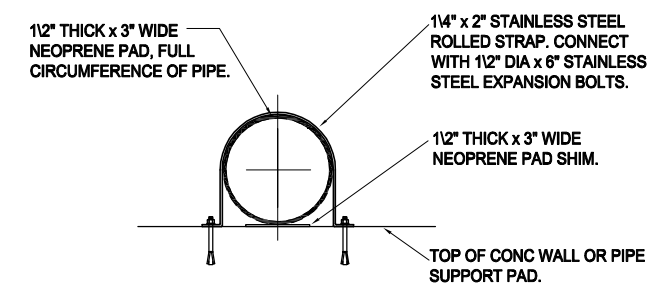
D INTERIOR WALL-ALTN BASE DETAIL
 SCALE: 1" = 1'-0" RE: _____



B INLET PIPE PENETRATION
 SCALE: 1" = 1'-0" RE: _____



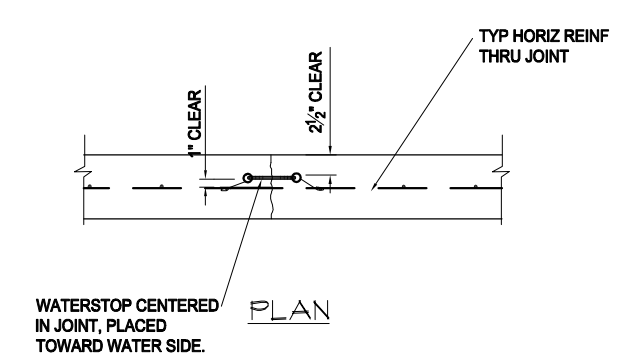
C REINF @ PIPE SUPPORT
 SCALE: 1" = 1'-0" RE: _____



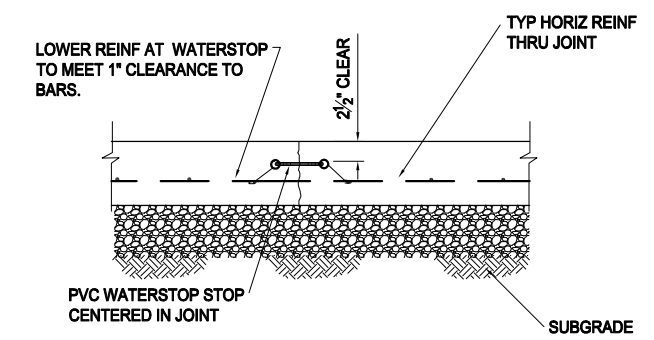
1 PVC PIPE SUPPORT
 SCALE: 1" = 1'-0" RE: _____

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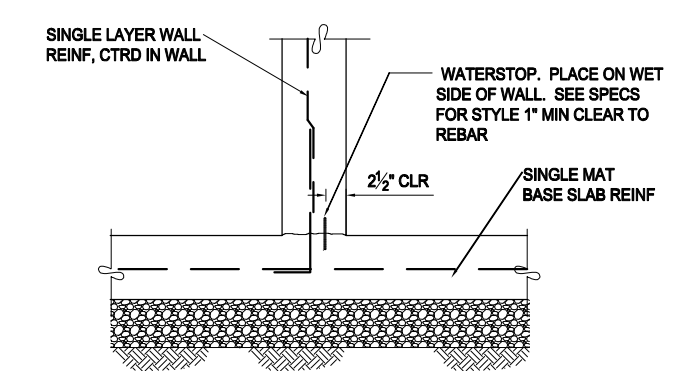
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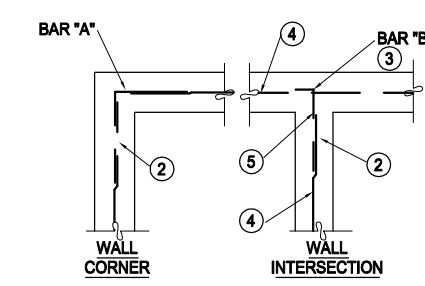
1 WALL CONSTRUCTION JOINT
 SCALE: 1" = 1'-0" RE: _____



2 BASE SLAB CONSTR JOINT
 SCALE: 1" = 1'-0" RE: _____

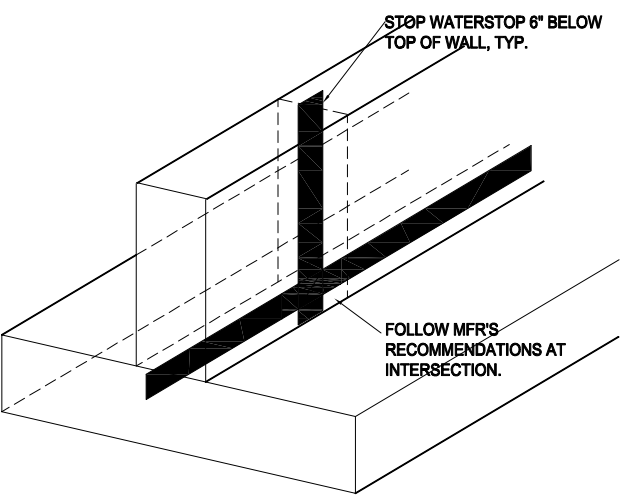


3 WALL BASE-SECURING WATERSTOP
 SCALE: 1" = 1'-0" RE: _____

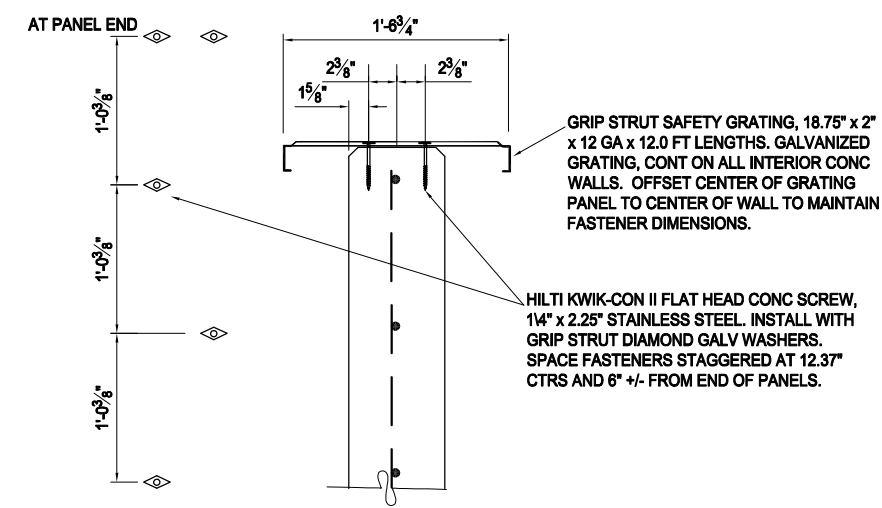


4 SINGLE LAYER CONC CORNER REINF
 SCALE: 1" = 1'-0" RE: _____

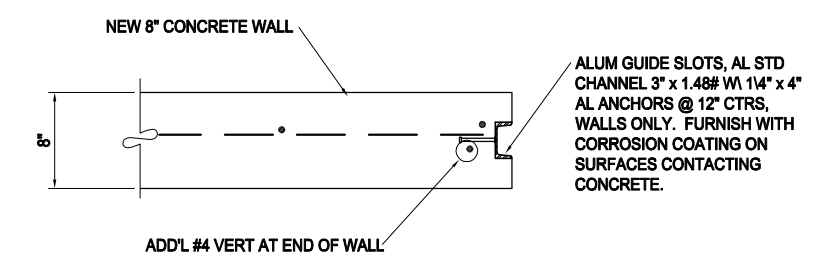
1. BARS "A" AND "B" SHALL MATCH SIZE AND SPACING OF TYPICAL HORIZONTAL WALL REINFORCEMENT, UNLESS SPECIFICALLY INDICATED ON PLANS.
 2. SPLICE LENGTH ON "A" AND "B" BARS SHALL BE MINIMUM OF 1'-8".
 3. BAR "B" SHALL HAVE A STANDARD HOOK AS DEFINED BY ACI 318.
 4. TYPICAL HORIZONTAL WALL REINFORCEMENT.
 5. THESE BARS MAY BE ELIMINATED IF WALL REINFORCEMENT TERMINATES IN STANDARD HOOKS.
- TYPICAL HORIZONTAL BARS ARE DEFINED AS AS TOP BARS.



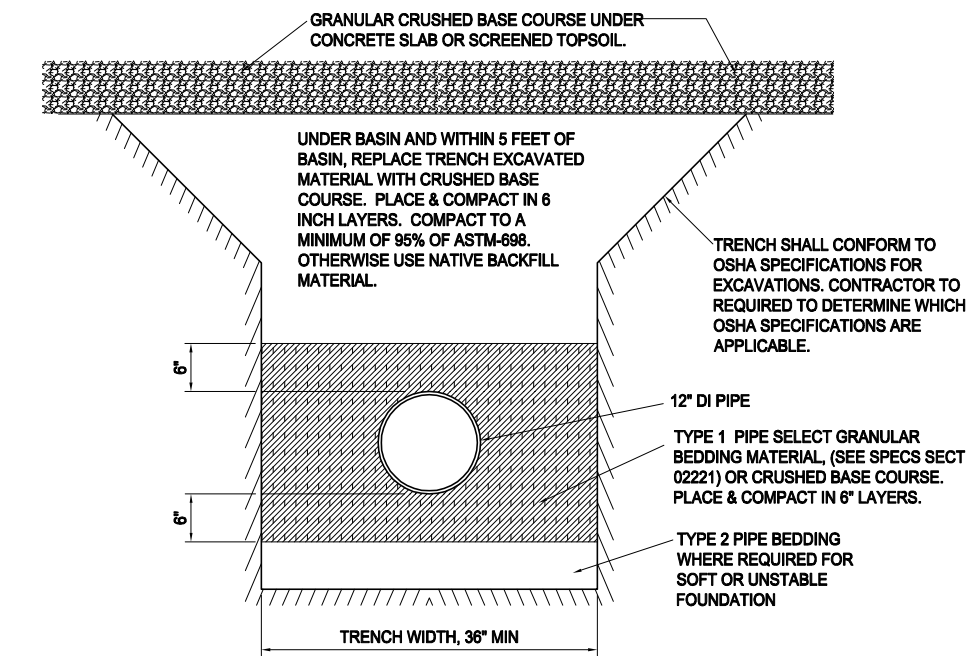
5 TYP WATERSTOP INTERSECTION
 SCALE: 1" = 1'-0" RE: _____



6 WALKWAY GRATING
 SCALE: 1.5" = 1'-0" RE: _____



7 GUIDE SLOTS - TYP 4 PLACES
 SCALE: 1.5" = 1'-0" RE: _____



9 PIPE BEDDING DETAIL
 SCALE: 1" = 1'-0" RE: _____

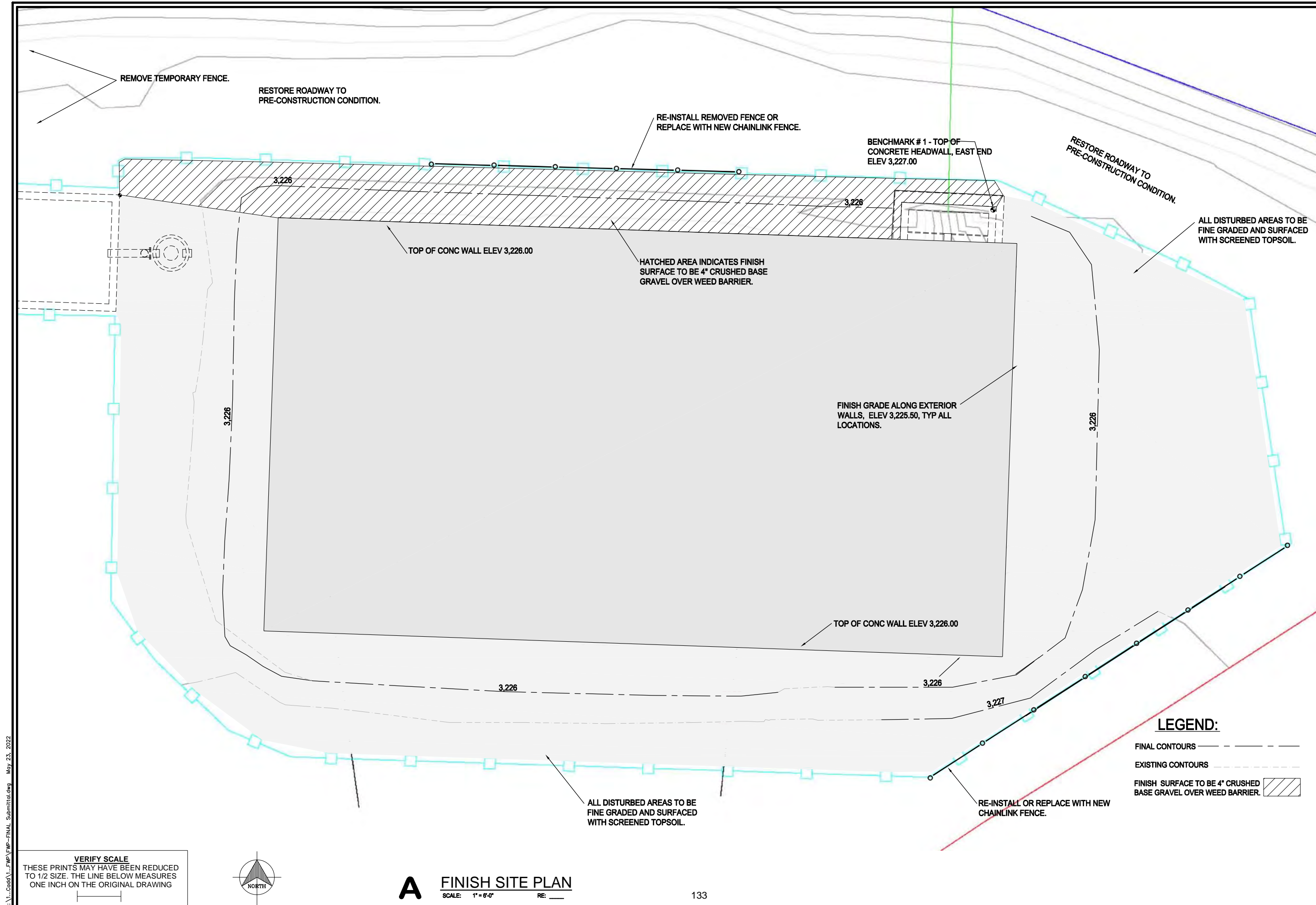
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SHEET TITLE
CONCRETE DETAILS

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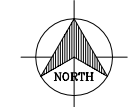
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SHEET TITLE
SITE GRADING AND RESTORATION

SHEET
9
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A FINISH SITE PLAN
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