

CIVIL GENERAL NOTES

GENERAL CONSTRUCTION NOTES

- All work shall be done in accordance with the "Standard Details for Public Works Construction", dated May 2013, "Standard Specifications for Public Works Construction", dated September 1986, as amended, of the Department of Public Works, County of Hawaii, the "Hawaii Standard Specification for Road and Bridge Construction", Department of Transportation, Highways Division, 2005, and AASHTO LRFD Bridge Construction Specifications, 3rd Edition with 2010 Interim Revisions (AASHTO Construction Specifications), unless indicated otherwise in the plans, these notes, or the special provisions. In the event of conflicting provisions in the AASHTO Construction Specifications and the State Standard Specifications, the State Standard Specifications shall apply.
- The contractor shall verify the location of all existing utilities, whether shown on the plan or not, and shall be responsible for the repair or replacement of same in the event of damages due to his construction practices. The contractor shall coordinate his work with the respective utility companies.
- The contractor shall maintain vehicular and pedestrian access to existing facilities at all times and shall schedule and prosecute his work in such a manner as to avoid interruption of normal activities at the existing facilities. The contractor shall provide early notification of and obtain approval for any anticipated interruptions. Contractor shall submit a construction phasing plan for approval prior to beginning construction. Temporary safe pedestrian passageways around or through a construction site shall comply with ADAAG Sections 206.1 and 402.1.
- The contractor shall provide and install all traffic control devices in conformance with the current version of the "Manual of Uniform Traffic Control Devices for Streets and Highways", and to the satisfaction of the engineer.
- Except during actual working hours, all signs which do not pertain to the construction activity, such as "Men Working" and "Flagman Ahead" shall be covered or laid down. However all signs necessary for the safety of the public shall be maintained.
- No construction equipment shall be parked within the road right-of-way in such a manner that the equipment will obstruct the normal movement and sight distance of the driving motorist, except during actual working hours.
- All existing pavements, walks, utilities, and other facilities whether shown on the plans or not, which are damaged by the contractor shall be reconstructed or replaced by the contractor at his own expense to the original undamaged condition.
- No trenching shall be left open for more than five (5) working days. Contractor shall properly barricade all open trenches during all phases of construction.
- Existing conditions are shown to the best of our knowledge. Discrepancies shall be promptly reported to the owner and be resolved before proceeding with the work.
- Prior to commencement of construction, the contractor shall verify the locations of all utilities, which may be affected by his work. Interference with the structure shall be promptly reported to the owner and be resolved before proceeding with the work.
- Should a discrepancy occur on the drawings between any project special notes/special details, and the typical specs/typical details, said special notes/special details shall take precedence.

ABBREVIATIONS

AB	Aggregate Base Course	Mech	Mechanical
AC	Asphalt Concrete	Min.	Minimum
Arch	Architectural	MJ	Mechanical Joint
CL	Centerline	N	North/Northing
CF	Curb Face	Pav't	Pavement
Conc	Concrete	PCC	Portland Cement Concrete
Cont	Continued/Continuous	PE	Plain End
CRM	Concrete Rubble Masonry	PL	Property Line
DPW	Department of Public Works	PO	Push On
DWS	Department of Water Supply	Reinf.	Reinforcing
Det	Detail	ROW	Right of Way
Diag	Diagonal	O.C.	On Center
Dwy	Driveway	O.D.	Outside Diameter
E	East/Easting	S	Slope
EL	Elevation	S.L.	Service Lateral
Elev	Elevation	Sect	Section
Ex	Existing	Std	Standard
FF	Finished Floor	TBM	Temporary Benchmark
FG	Finished Grade	TC	Top of Curb/Concrete
FL	Flowline	TG	Top of Grate
Flg	Flanged	Thk.	Thick/Thickness
FS	Finished Surface	TOF	Top of Footing
GV	Gate Valve	TOP	Top of Pipe
HDPE	High Density Polyethylene	TW	Top of Wall
ID	Inside Diameter	Typ	Typical
Inv	Invert	U.O.N.	Unless Otherwise Noted
Max	Maximum	WV	Water Valve

GRADING NOTES

- All grading work shall conform to Chapter 10 of the Hawaii County Code. Should a grading permit be required, no work shall commence until the Department of Public Works approves a grading permit.
- The contractor shall remove all silt and debris deposited in drainage facilities, roadways and other areas resulting from his work. The costs incurred for any necessary remedial action by the owner shall be payable by the contractor.
- The contractor, at his own expense, shall keep the project and surrounding areas free from dust nuisances. The work shall be in conformance with the air pollution control rules of the State Department of Health, HAR 11–60.1. Fugitive dust.
- All grading operations shall be performed in conformance with the applicable provisions of the Hawaii Administrative Rules, Title 11, Chapter 55, Water Pollution Control and Chapter 54, Water Quality Standards, and to the Erosion and Sedimentation Control Standards and Guidelines of the Department of Public Works, County of Hawaii.
- The contractor shall sod or plant all slopes and exposed areas immediately after the grading work has been completed.
- The contractor shall inform the Department of Public Works of the locations of the disposal and/or borrow site(s) required for this project when an application for a grading permit is made. The disposal and/or borrow site(s) must also fulfill the requirements of the grading ordinance.
- No grading work shall be done on Saturdays, Sundays and holidays anytime without prior approval from the owner. Grading work on normal working days shall be between the hours of 7:00am to 3:30pm.
- The contractor shall verify all lines, levels, elevations, and improvements indicated on the drawings before any clearing, excavation or construction begins. Any discrepancy shall be immediately brought to the attention of the owner and any change shall be made in accordance with his instruction. Starting of clearing and grubbing operations shall be construed to mean that the contractor agrees that the existing grades and improvements are essentially correct as shown. The contractor shall not be entitled to extra payment if existing grades and improvements are in error after his verification thereof, or if he fails to report the discrepancies before proceeding with any work whether within area affected or not.
- The contractor shall remove all vegetation, organic debris, trash, large boulders, muck/mud and any deleterious materials before the placing of fills on a natural ground surface. The removed materials shall be disposed of off-site in accordance with applicable Hawaii County regulations.
- The exposed ground surfaces shall be proof-rolled with a minimum 20-ton vibratory drum roller for a minimum of eight passes to help detect and collapse near-surface cavities and/or voids.
- Unless otherwise approved by a geotechnical engineer licensed in State of Hawaii, permanent cut slopes in loose clinker, broken rock or rock soil mix shall not be steeper than 2 horizontal to 1 vertical (2H:1V). Cut slopes in ash soil or loosely compacted soil shall be no steeper than 3 horizontal to 1 vertical (3H:1V). Near vertical cut slope in solid rock shall be inspected and approved by the geotechnical engineer.

- Fill slopes shall not be built steeper than 2 horizontal to 1 vertical (2H:1V). The face of all fill slopes shall be overfilled and cut back or continuously compacted with heavy equipment as the slope progresses.
- Existing slope (steeper than 15% grade) shall be benched and keyed prior to placing fill material. Benching shall be level or with a slight negative grade (sloping down toward hillside). Overexcavate a 5' deep by 5'wide minimum continuous key into the existing grade at the toe of proposed slope construction (daylight elevation). New fill slopes shall be over-built in horizontal compacted layers and cut back to the design slope.
- Unless otherwise noted, structural fill and backfill beneath Building Pad and pavement areas and trench backfill material shall be compacted to a minimum of 95% compaction of the Maximum Dry Density per ASTM D1557.
- General fill in areas outside of structural fill shall be compacted to a minimum 90% relative compaction in accordance with ASTM D1557.
- For compaction, structural fill materials should be placed in level lifts not exceeding 10 inches in loose thickness, and compacted to a minimum of 90 percent relative compaction in accordance with ASTM D1557.
- Estimated earthwork quantities

Total raw cut = 2 C.Y.
Total raw fill = 325 C.Y.

Total area to be graded = 10,141 sq. ft.

Notes:

- The quantities shown are for grading permit purposes only. The contractor shall be responsible to determine the exact quantities for bidding purposes.
- No adjustment factor is applied to the raw cut/fill quantities.
- Earthwork quantities shown were taken from existing ground to finish grade.
- Contractor/bidder shall not use the earthwork quantities shown above for bidding purposes. Regardless of the cut and fill earthwork quantities shown above, the contractor is responsible to import or export all necessary materials to complete the grading work at no additional cost to the owner.

CONCRETE NOTES (FOR SITE CONCRETE ONLY)

- All concrete unless otherwise noted shall be regular weight hard rock type (150 lb/cu. Ft.)
- All phases of work pertaining to the concrete construction shall conform to the "Building Code Requirements for Reinforced Concrete" (ACI 318) with modification as noted in the drawings or specifications.
- Schedule of concrete 28-day strength and types:

Location of Structure	Strength
Walkway	2,500 psi
All other concrete	2,500 psi
- Portland cement shall conform to ASTM C–150 type II.
- Aggregate for hardrock concrete shall conform to all requirements and tests of ASTM C–33 and project specifications.
- Concrete mixes shall be designed by a qualified testing laboratory and shall be submitted to the engineer for his review.
- Concrete mixing operation, etc. shall conform to ASTM C–94.
- Placement of concrete shall conform to ACI Standard 301 and project specifications.
- Unless otherwise noted on the plans, minimum clear coverage of new concrete over outer reinforcing bars shall be as follows:
 - Concrete poured directly against earth_____3" clear to reinforcing
- All reinforcing bars, anchor bolts and other concrete inserts shall be well secured in position prior to placing concrete.
- Projecting corners of beams, walls, columns, equipment pads, etc. shall be formed with 3/4" chamfer, unless otherwise noted on architectural drawings.
- Provide sleeves for plumbing and electrical openings in concrete before placing. Do not cut any reinforcing which may conflict. Coring in concrete is not permitted except as shown. Notify the engineer in advance of conditions not shown on the drawings.
- Conduit or pipe size (O.D.) that is buried in any concrete slabs shall not exceed 25 percent of slab thickness and shall be placed between the top and bottom reinforcing unless specifically detailed otherwise. Concentrations of conduits or pipes shall be avoided except where detailed openings are provided.
- The concrete slab thickness shall be maintained as a minimum unless otherwise shown.

REINFORCING STEEL NOTES (FOR SITE CONCRETE ONLY)

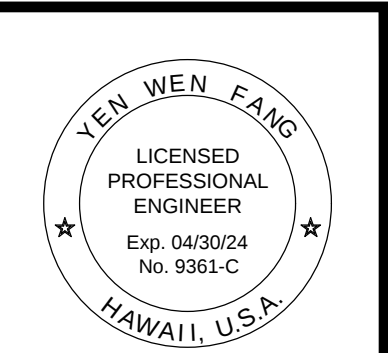
- All reinforcing steel shall be detailed and placed in conformance with the "Building Code Requirements for Reinforced Concrete" (ACI 318), the CRSI "Manual of Standard Practice", and the "ACI Detailing Manual – 1994" (SP–66) as modified by the project drawings and specifications.
- Reinforcing bars shall conform to ASTM A–615 Grade 60 requirements. #4 and smaller bars may be grade 40 unless otherwise noted.
- Anchor bolts, dowels and other embedded items are to be securely tied in place before concrete is poured.
- All reinforcing bar bends shall be made cold.
- Reinforcing splices shall be made only where indicated on the drawings.
- Dowels between footing and wall or columns shall be the same grade, size, spacing, and number as the vertical reinforcing respectively, unless otherwise noted.
- Welding of reinforcing steel is not permitted unless otherwise shown on the drawings.
- Reinforcing bars shall be as long as practicable and as detailed and shall be lapped at splices and corners not less than 32 bar diameter (24" minimum), unless otherwise shown. Stagger horizontal wall bar splices. In general, bar splices shall be made at points of minimum stress. In beams and slabs, splice top bars at mid-span, bottom bars over supports, unless otherwise shown.
- Embedded metal components made up of alloys that are dissimilar to that of the reinforcing steel shall not be attached directly to reinforcing. Measures shall be taken to electrically isolate said components from any reinforcing to prevent cathodic effects.

EROSION / TEMPORARY DUST CONTROL NOTES

- During construction, preventive measures shall be used to control foreseeable dust, erosion or sedimentation problems which may arise as the job progresses.
- Drainage systems as shown on the construction plans shall be constructed as early as practically possible.
- The contractor shall conduct his grading operations so that excavation, embankment and imported material shall be damped with water during his grading operations at all times.
- Water truck and/or temporary sprinklers shall be available on the jobsite at all times to ensure bare earth does not create dust problems. However, dust control watering shall not be excessive so that runoff will not be generated from watering.
- Fugitive dust and solid waste disposal during grubbing and grading activities shall meet requirements of Administrative Rules, Title 11, Chapter 60, Air Pollution Control and Chapter 58, Solid Waste Management Control.

SOLID WASTE NOTES

- All wastes generated by construction including grubbing excess are prohibited at all transfer stations island wide. Construction wastes may be delivered directly to the South Hilo or West Hawai'i Sanitary Landfills.
- Hazardous materials are only accepted at the West Hawai'i Sanitary Landfill.
- The contractor is responsible to obtain a "Notice of Authorization to Dispose" prior to the disposal of any construction and demolition debris.
- If more than 50 cubic yards of waste will be delivered to the landfill, the contractor is responsible to notify the scale house 72 hours prior to arrival.
- The contractor is responsible to provide all necessary labor, equipment, materials and supplies to properly landfill his waste.
- A Solid Waste Management Plan has been prepared for this project. The contractor is responsible to review this plan and notify the engineer if any revisions are necessary.
- If demolition will occur, the contractor is responsible to prepare and submit a Solid Waste Demolition Diversion Report to the County of Hawai'i Department of Environmental Management.



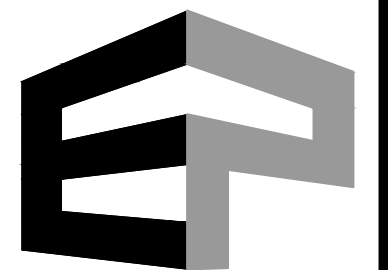
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Yen Wen Fang
SIGNATURE

GENERAL CONTRACTOR:

REVISIONS	NO.	DESCRIPTION	DATE
	1	FINAL DRS SET	07/11/22
	2	DRAINAGE COORDINATION	12/19/22

**SINGLE FAMILY RESIDENCE
LOT 31 NOHEA, PHASE 1**
TMK: 3-6-8-043-031
NOHEA AT MAUNA LANI, LLC
16130 VENTURA BLVD. STE 510
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DATE
12/19/23

SCALE
As indicated

SHEET
TITLE:
NOTES

SHEET
NUMBER:

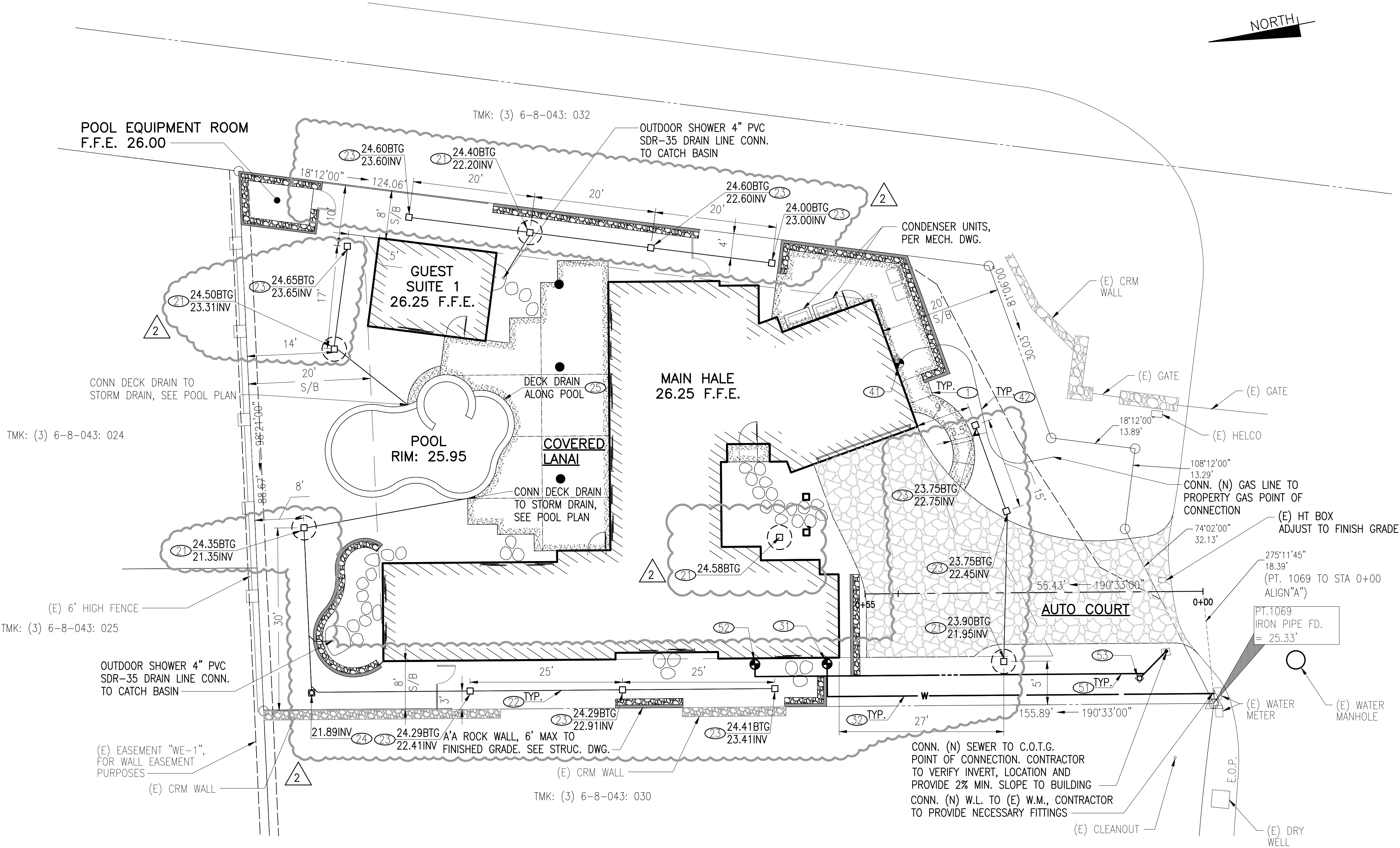
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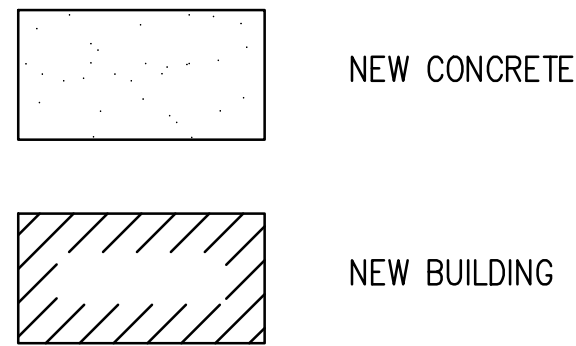
SITE PLAN

SCALE: 1" = 10'

0 10' 20'



LEGEND



PAV'T CONST. NOTES

- ① CONSTRUCT 4"THICK CONC. WALK PER DETAIL 1
C3.1

DRAINAGE CONST. NOTES

- ②① CONSTRUCT 24"Ø NDS FLO-WELL WITH DRAIN ROCK WELL PER DETAIL 8
C3.1
- ②② CONSTRUCT 4" PVC-SDR-35 STORM DRAIN, WITH A 2% SLOPE MIN., PER DETAIL 6
C3.1
- ②③ CONSTRUCT SQUARE GRATED INLET WITH CATCH BASIN AND SUMP BOX, PER DETAIL 5
C3.1
- ②④ CONSTRUCT NON-TRAFFIC RATED CLEANOUT TO GRADE (C.O.T.G.) PER DETAIL 4
C3.1
- ②⑤ CONSTRUCT MICRO CHANNEL DRAIN SYSTEM, PER DETAIL 1
C3.2

WATER CONST. NOTES

- ⑤① CONNECT NEW WATER LINE TO BUILDING WATER LINE. SEE PLUMBING DRAWINGS FOR CONTINUATION 6
C3.1
- ⑤② CONSTRUCT HDPE SDR9 POTABLE WATERLINE, SIZE PER PLAN, PER DETAIL 6
C3.1

GAS CONST. NOTES

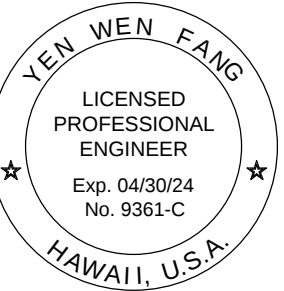
- ④① CONNECT NEW GAS LINE TO BUILDING GAS METER LINE. SEE PLUMBING DRAWINGS FOR CONTINUATION 2
C3.1
- ④② CONSTRUCT HDPE SDR-11 GAS LINE PER DETAIL, SIZE PER PLUMBING DRAWINGS 2
C3.1

SEWER CONST. NOTES

- ⑤① CONSTRUCT ON-SITE 4" PVC SDR-35 BUILDING SEWER LATERAL, WITH A 2% SLOPE MIN., PER DETAIL 6
C3.1
- ⑤② CONNECT NEW SEWER LINE TO BUILDING SEWER LINE. SEE PLUMBING DRAWINGS FOR CONTINUATION 4
C3.1
- ⑤③ CONSTRUCT NON-TRAFFIC RATED CLEANOUT TO GRADE (C.O.T.G.) PER DETAIL 4
C3.1

NOTES:

- ALL PIPING UNDER ROCK WALLS SHALL BE CONSTRUCTED WITH PIPE SLEEVES
- CONTRACTOR TO VERIFY BUILDING LAYOUT IS WITHIN THE SETBACKS PRIOR TO CONSTRUCTION.
- PROVIDE PRE-CAST CONCRETE SPLASH BLOCKS AT ALL ROOF DOWN SPOUTS
- OFFSET WALL BASE 2" MINIMUM FROM PROPERTY LINE. WALLS AND FENCES WITHIN BUILDING SETBACK SHALL NOT EXCEED 6' ABOVE FINISH GRADE. WALL DETAILS PER STRUCTURAL PLANS
- PROPERTY AZIMUTH AND DISTANCE SHOWN IS BASED ON RECORD MAP.



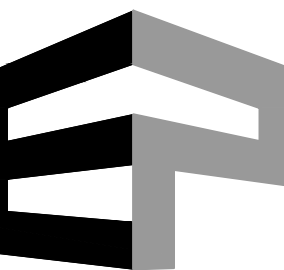
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Yen Wen Fang
SIGNATURE

GENERAL CONTRACTOR:

REVISIONS	DESCRIPTION	DATE
1	FINAL DRS SET	07/11/22
2	DRAINAGE COORDINATION	12/19/22

SINGLE FAMILY RESIDENCE
LOT 31 NOHEA, PHASE 1
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DATE 12/19/23

SCALE As indicated

SHEET TITLE: **SITE PLAN**

SHEET NUMBER:

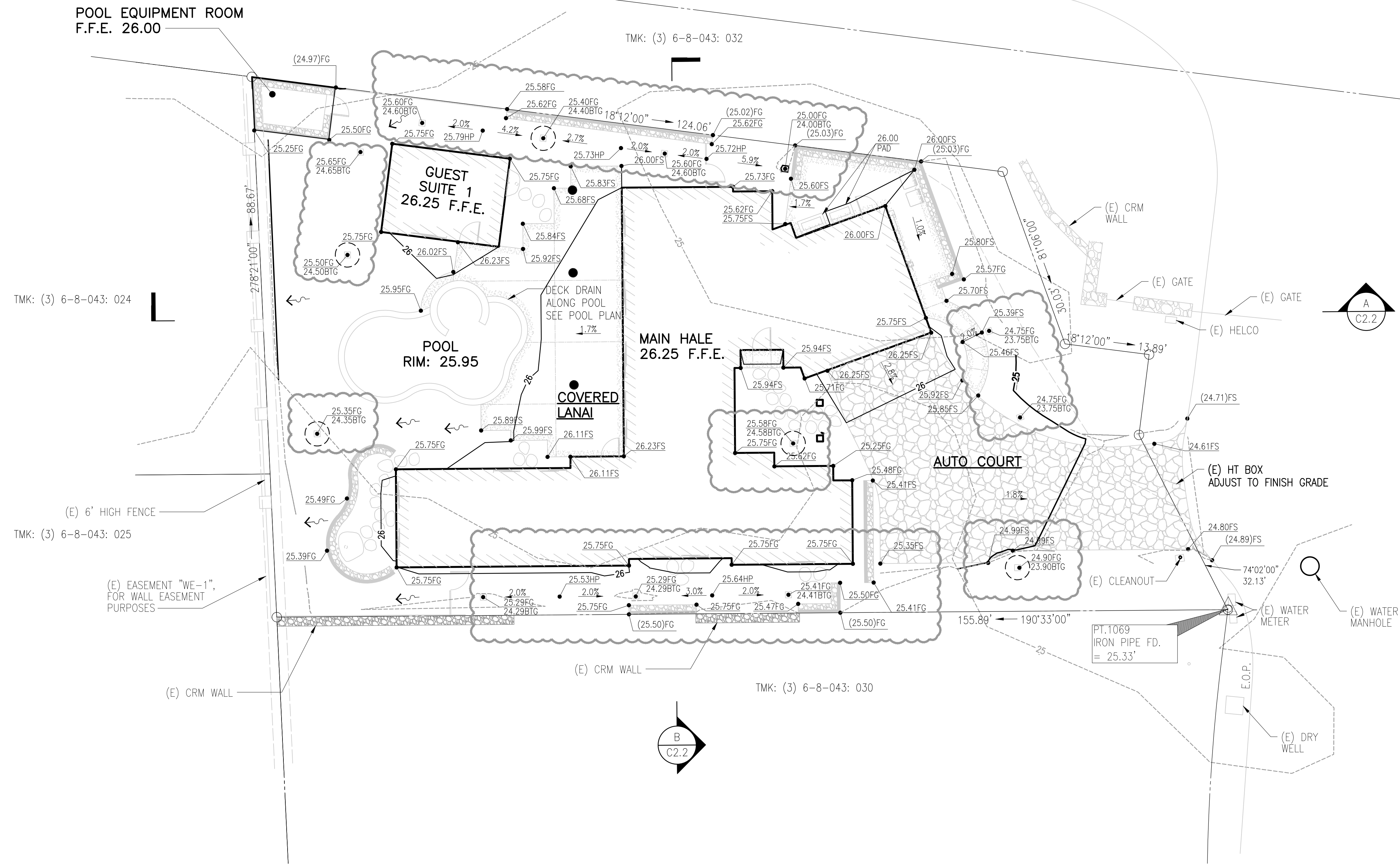
C1.1

A

GRADING PLAN

SCALE: 1" = 10'

0 10' 20'



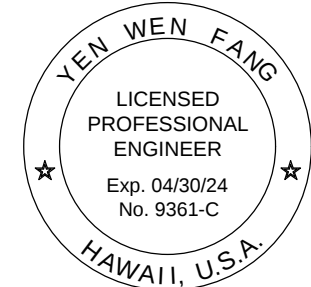
SPOT ELEVATIONS

ABBREVIATION

BTG: BELOW GRADE TOP OF GRATE
FG: FINISH GRADE
FL: FLOW LINE
FS: FINISH SURFACE
HP: HIGH POINT
TG: TOP OF GRATE
(ELEV): MATCH EXISTING ELEVATION

LEGEND

- NEW CONCRETE
- NEW BUILDING
- GB— GRADE BREAK
- SWALE LINE
- 100--- EXISTING CONTOURS
- 100— NEW FINISH GRADE CONTOURS
- GRADING DAYLIGHT LINE
- DRAINAGE DIRECTION: GRADE AWAY FROM BUILDING, GRADE TOWARDS SWALE AND AREAS DRAINS



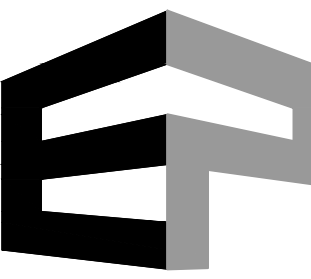
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Signature of Yen Wen Fang

GENERAL CONTRACTOR:

REVISIONS	DESCRIPTION	DATE
1	INITIAL DRS SET	07/11/22
2	DRAINAGE COORDINATION	12/19/22

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ENGINEERING PARTNERS

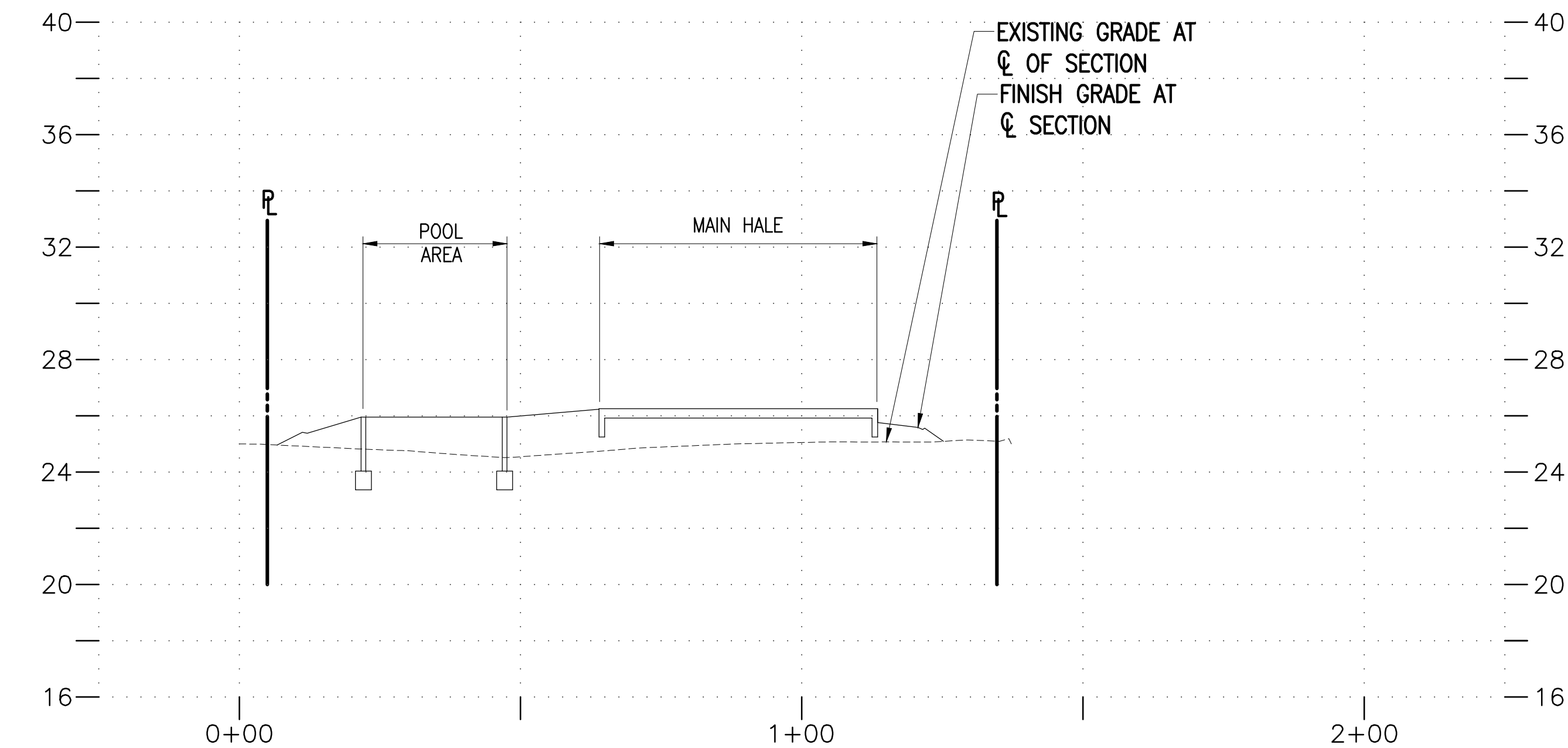
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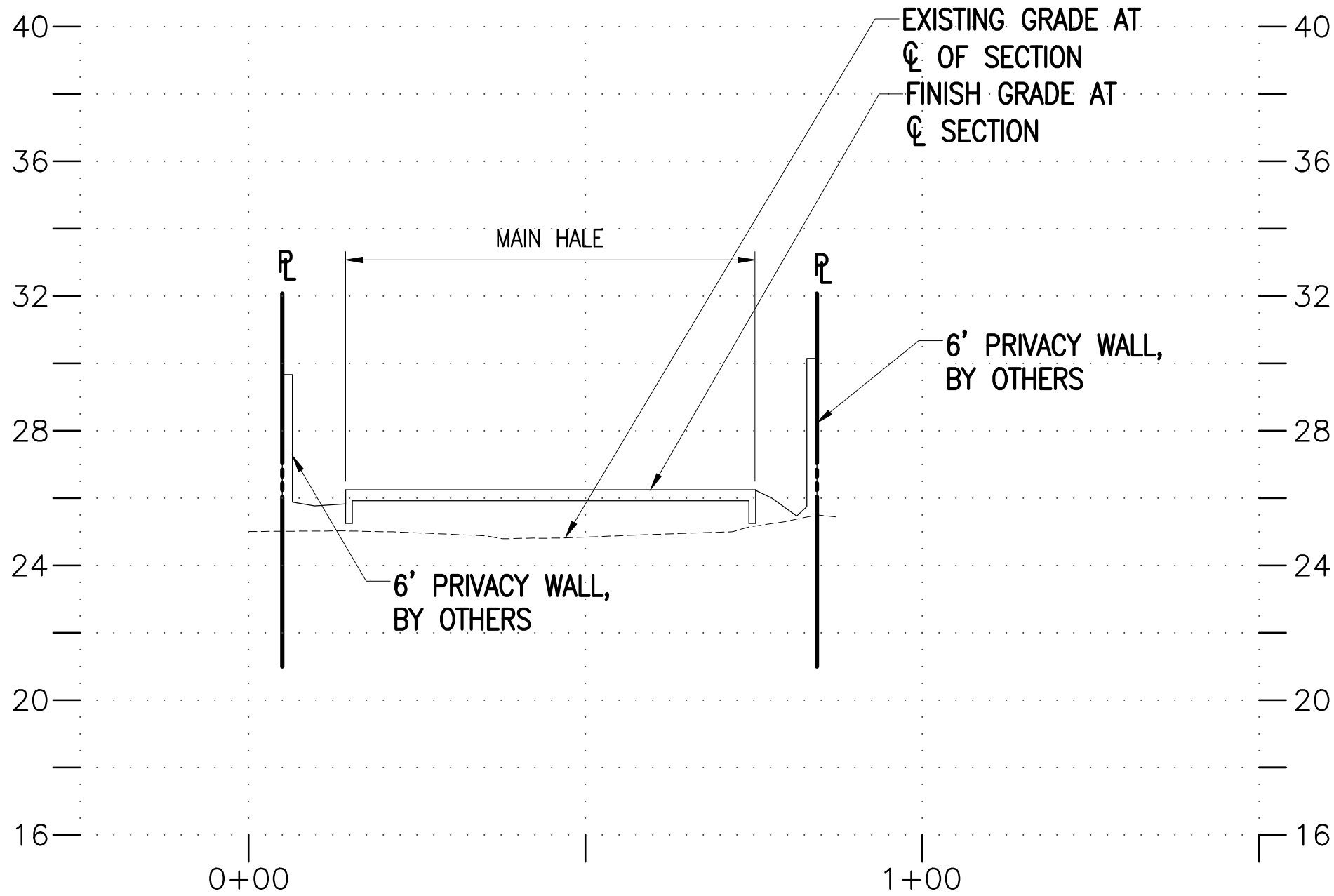
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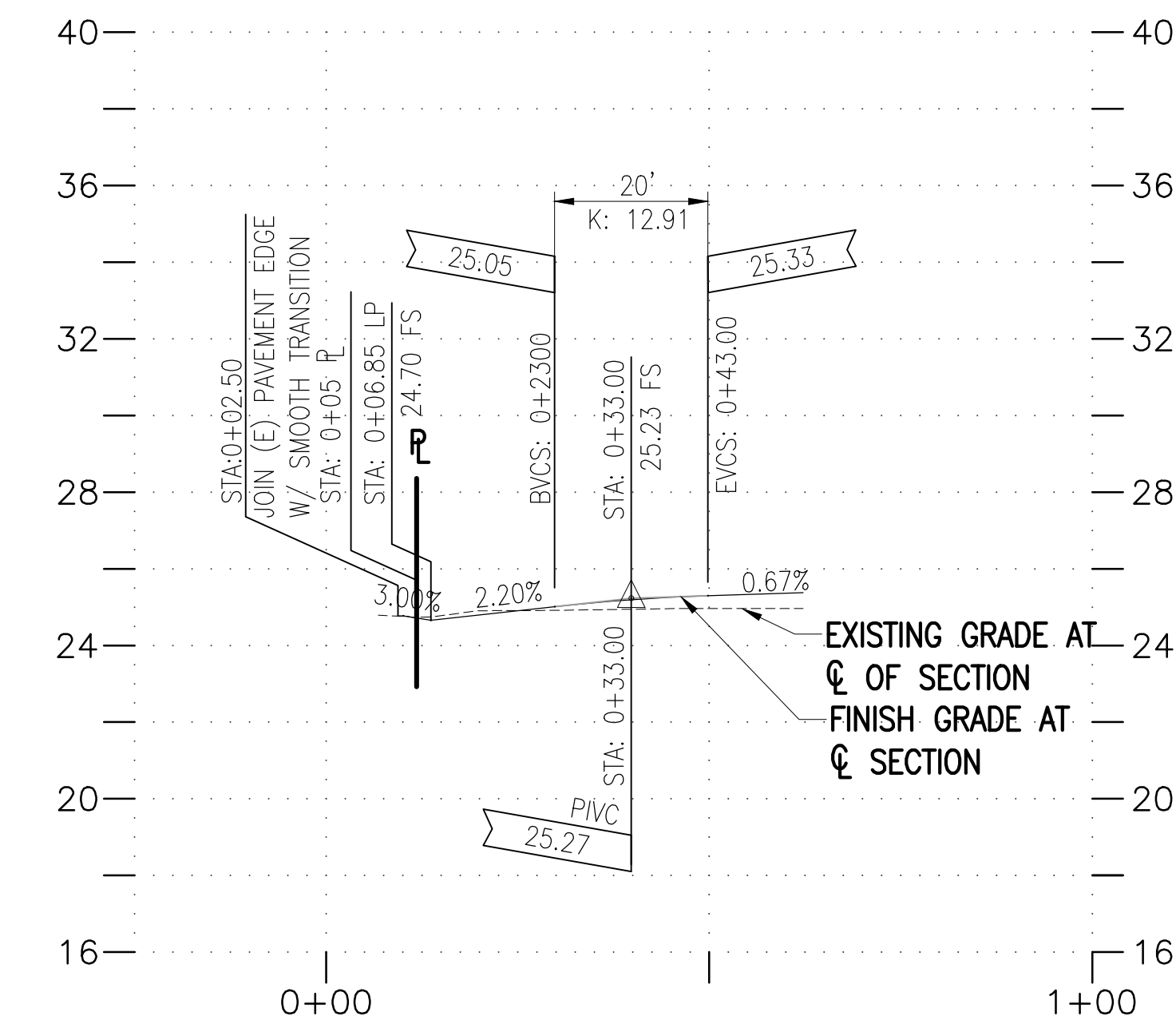
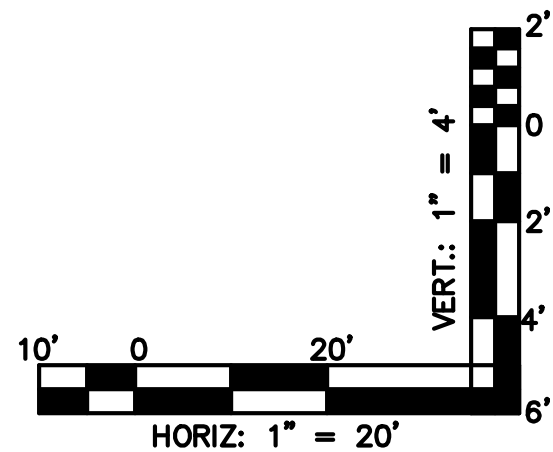
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A SITE SECTION 'A'
SCALE: 1" = 20'



B SITE SECTION 'B'
SCALE: 1" = 20'



C DRIVEWAY PROFILE
SCALE: 1" = 20'

YEN WEN FANG

LICENSED PROFESSIONAL ENGINEER

Exp. 04/30/24

No. 9361-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.



SIGNATURE

GENERAL CONTRACTOR:

REVISIONS	DESCRIPTION	DATE
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2	DRAINAGE COORDINATION	12/19/22

SINGLE FAMILY RESIDENCE

LOT 31 NOHEA, PHASE 1

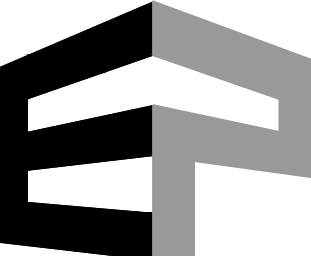
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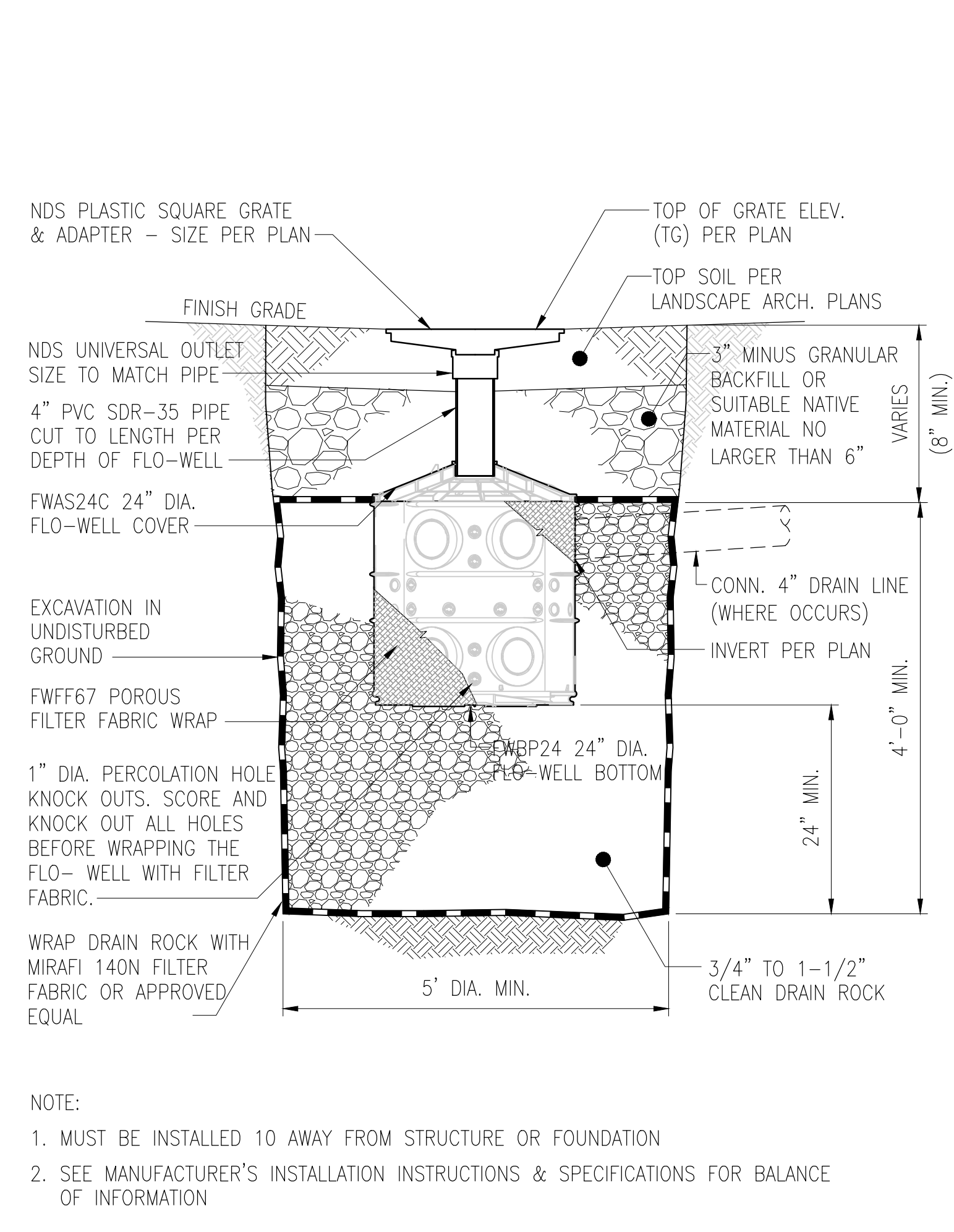
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DATE
12/19/23

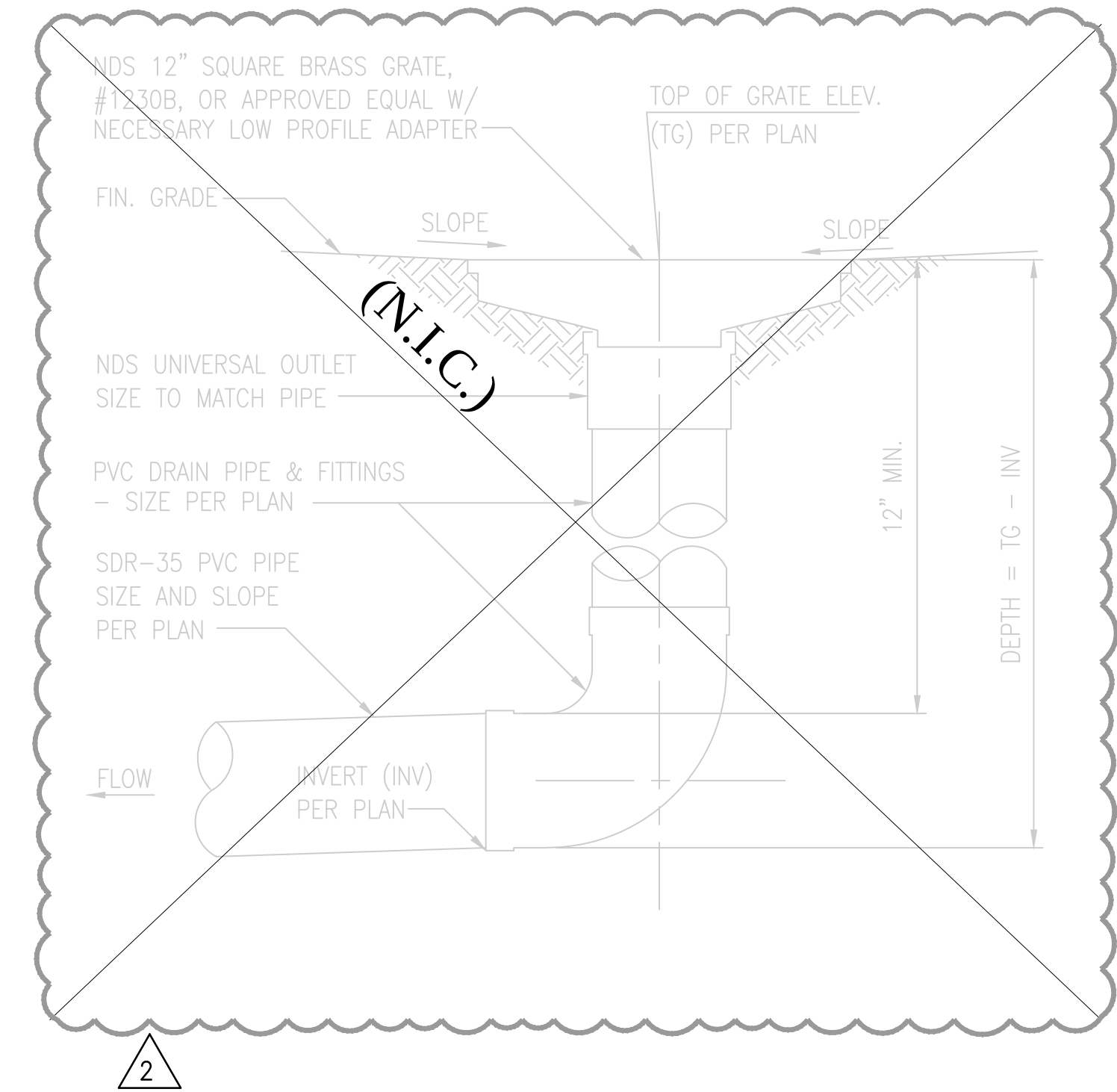
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SHEET TITLE:
CROSS SECTIONS

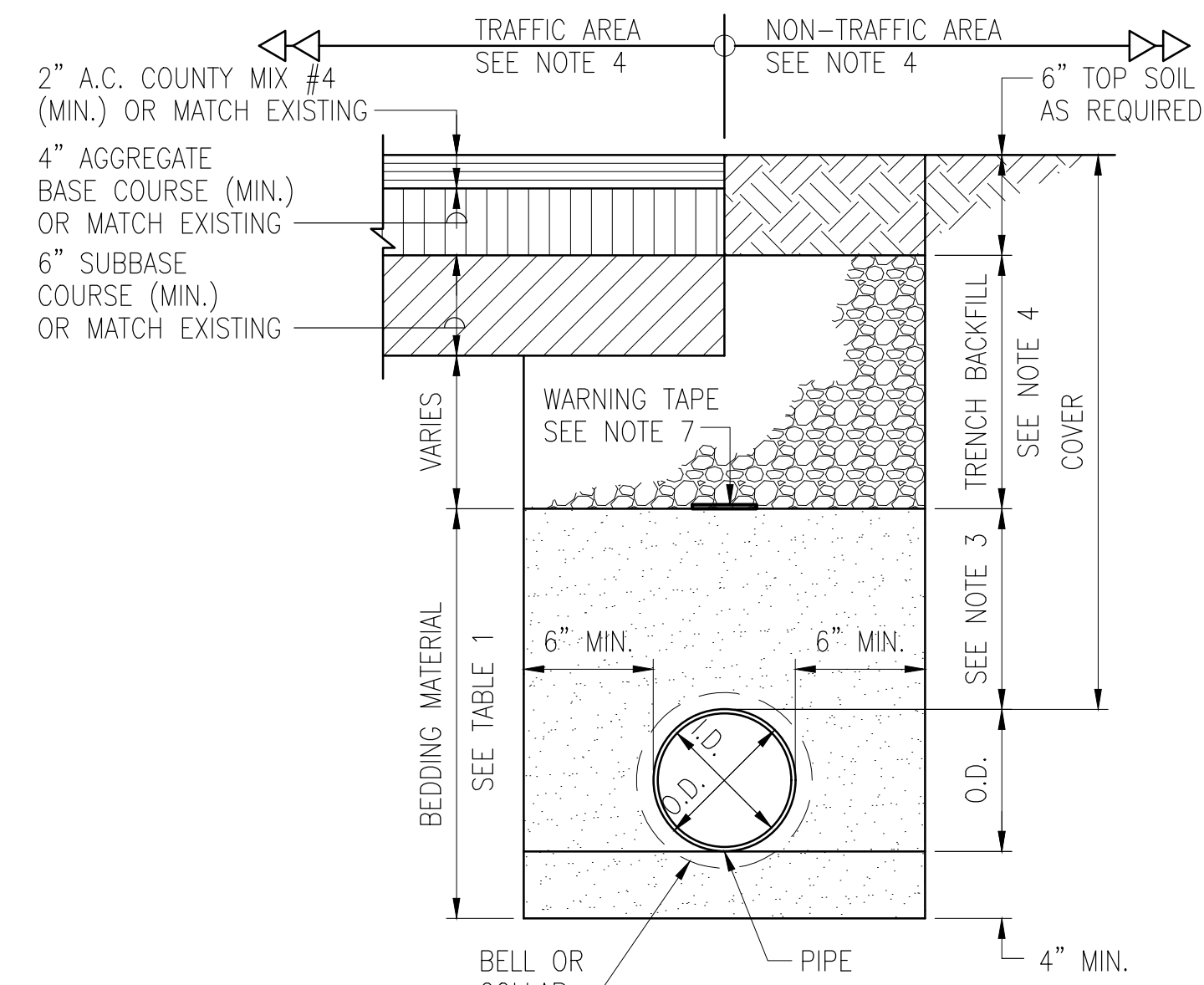
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C2.2



8 NDS FLO-WELL DETAIL
SCALE: NOT TO SCALE



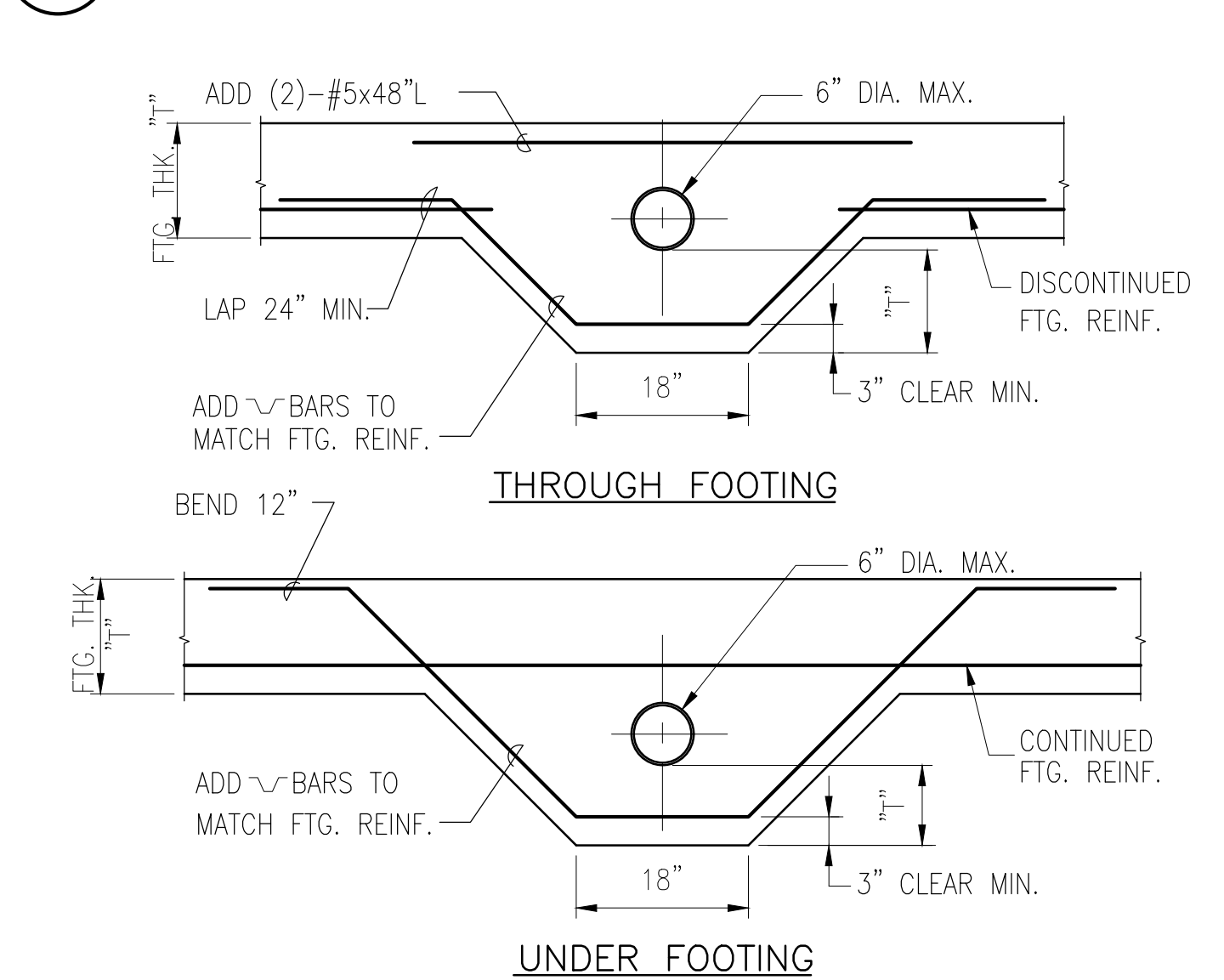
9 GRATED YARD DRAIN DETAIL
SCALE: NOT TO SCALE



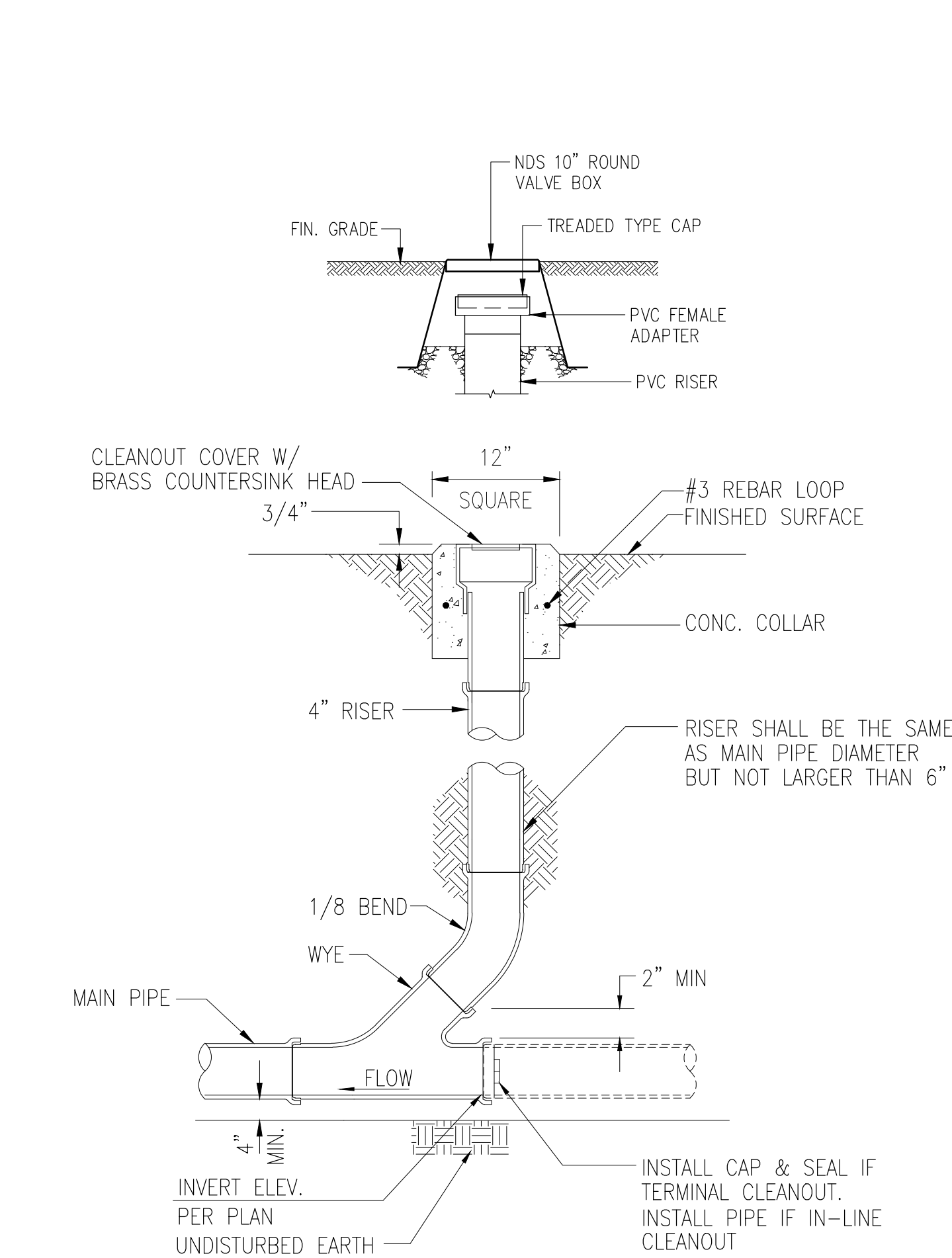
- NOTES:
- THIS TRENCH SECTION APPLIES TO FLEXIBLE PIPES INCLUDING SEWER, STORM DRAIN, AND WATERLINES. FLEXIBLE PIPE MATERIAL INCLUDES COPPER, CMP, PVC, ABS, AND HDPE.
 - BEDDING MATERIAL ABOVE PIPE SHALL BE 12" HIGH FOR GRANULAR MATERIAL AND 6" HIGH FOR CONCRETE. NO. 10 OR NO. 67 GRANULAR BEDDING SHALL BE COMPACTED BY MAKING TWO PASSES PER LIFT WITH A VIBRATORY PLATE COMPACTOR. BEDDING MATERIAL FOR PIPES 2" OR LARGER SHALL BE 3/4" BASE COURSE COMPACTED TO 95% MAX. DRY DENSITY.
 - INCH BACKFILL SHALL BE 3" MINUS GRANULAR BACKFILL OR SUITABLE NATIVE MATERIAL NO LARGER THAN 6". TRENCH BACKFILL SHALL BE COMPACTED TO 95% MAX. DRY DENSITY.
 - TRAFFIC AREA SHALL INCLUDE BUT NOT BE LIMITED TO PAVED OR UNPAVED ROADWAY, SHOULDER, DRIVEWAY, AUTOCOURT AND AREAS NOT PROTECTED FROM TRAFFIC LOAD. NON-TRAFFIC AREA SHALL BE PROTECTED FROM TRAFFIC LOAD BY MEANS OF CONCRETE CURBS, GUARDRAILS, AND AREAS INACCESSIBLE BY VEHICLES.
 - BEDDING MATERIAL FOR COPPER PIPE SHALL BE #4 SAND OR CONCRETE ONLY.
 - MIN. 6" WIDE WARNING TAPE IDENTIFYING THE BURIED UTILITY SHALL BE PLACED CONTINUOUSLY ALONG THE LENGTH OF THE PIPE, ON TOP OF BEDDING MATERIAL. FOR METALLIC PIPE, TAPE SHALL BE NON-METALLIC. FOR NON-METALLIC PIPE, TAPE SHALL BE DETECTABLE BY STANDARD, NON-DESTRUCTIVE PIPE DETECTION METHODS.

TABLE 1: BEDDING MATERIAL		
DEPTH OF COVER IN FT.	TRAFFIC AREA	NON-TRAFFIC AREA
6" < COVER < 12"	NOT ALLOWED	ALLOWED FOR 6"Ø PIPE OR SMALLER ONLY WITH NO. 10 CRUSHED ROCK (SEE NOTE 3)
12" < COVER < 18"	ALLOWED FOR 6"Ø PIPE OR SMALLER ONLY WITH CLASS "C" CONCRETE	NO. 10 CRUSHED ROCK (#4 SAND) (SEE NOTE 3)
18" < COVER < 24"	CLASS "C" CONCRETE	NO. 10 OR NO. 67 CRUSHED ROCK (SEE NOTE 3)
COVER > 24"	NO. 10 OR NO. 67 CRUSHED ROCK	NO. 10 OR NO. 67 CRUSHED ROCK (SEE NOTE 3)

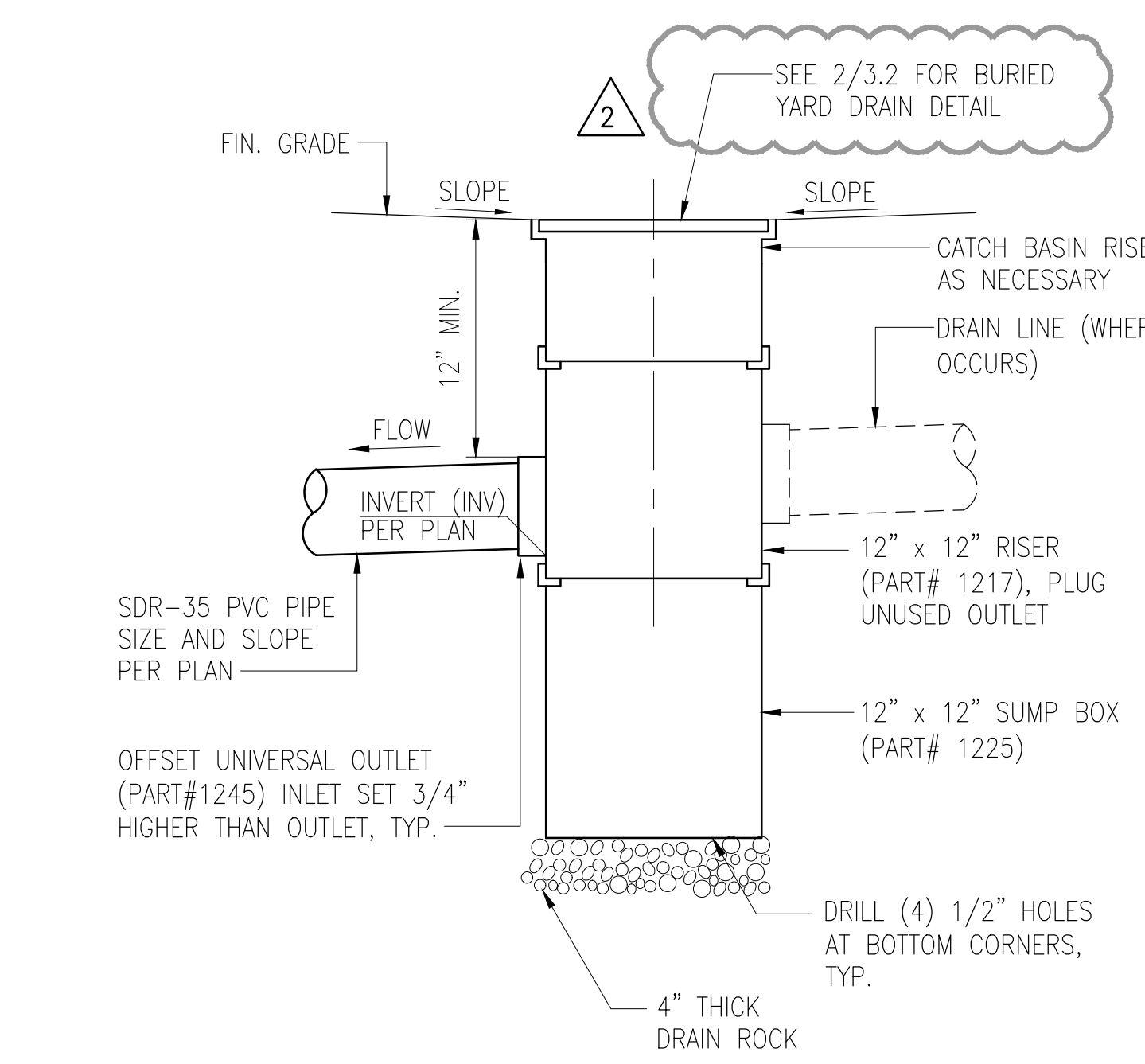
6 FLEXIBLE PIPE TRENCH SECTION
SCALE: NOT TO SCALE



7 TYP. PIPE SLEEVE FOOTING
SCALE: NOT TO SCALE

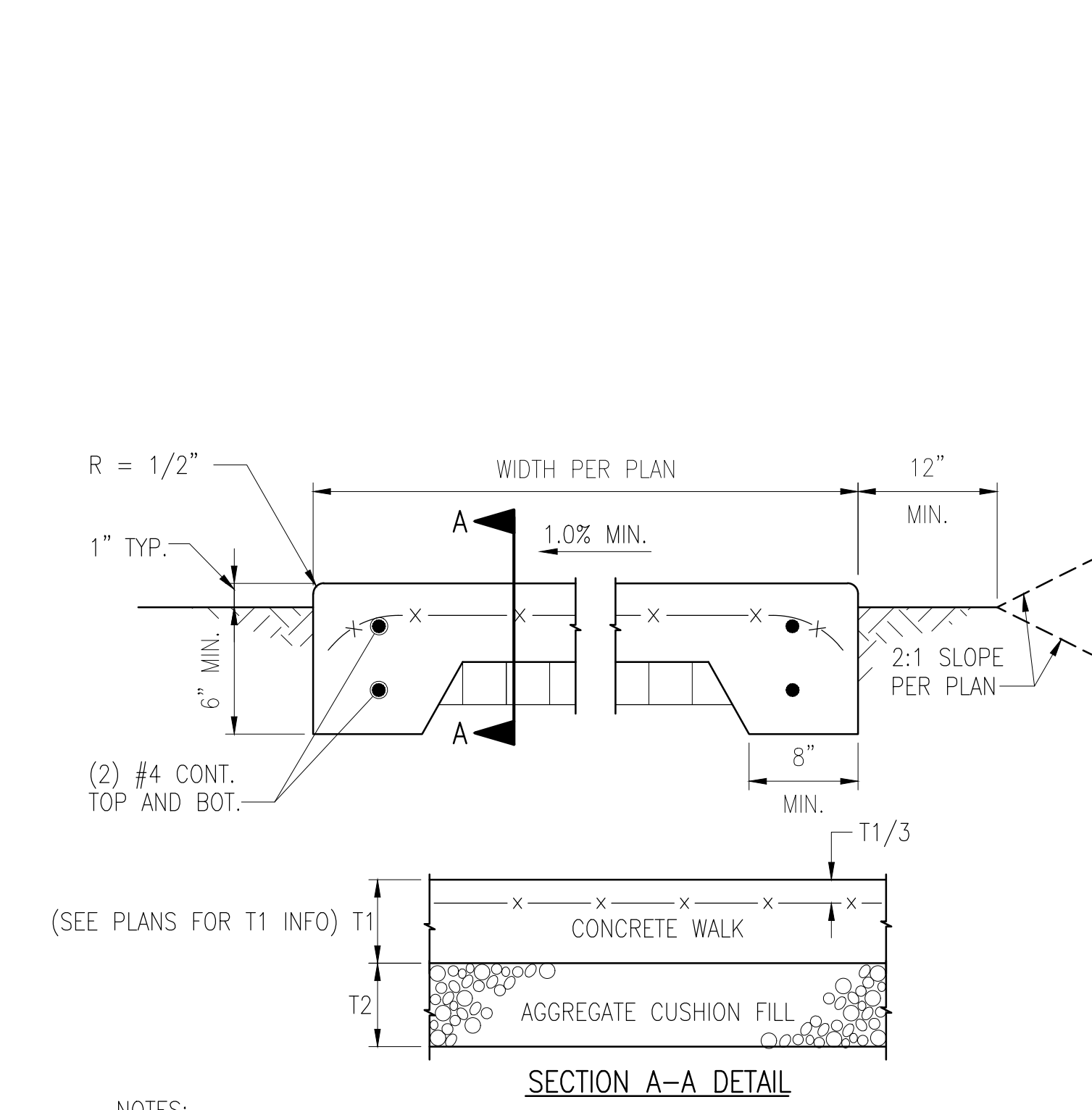


4 CLEANOUT TO GRADE (C.O.T.G.)
SCALE: NOT TO SCALE

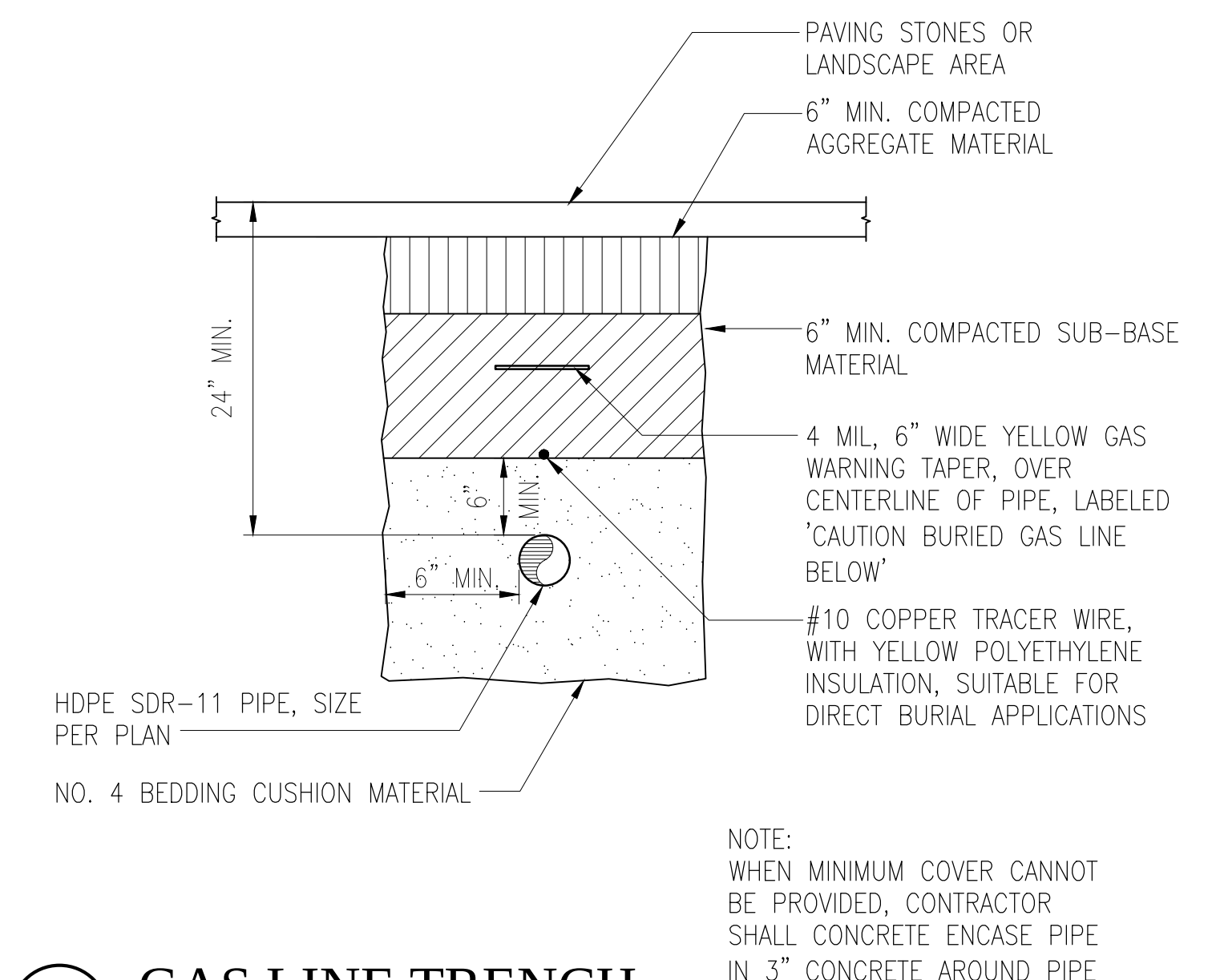


- NOTE
- FRAME MUST BE ATTACHED TO CATCH BASIN BEFORE BACKFILLING
 - INSTALL GRATED INLET PER MANUFACTURE'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS

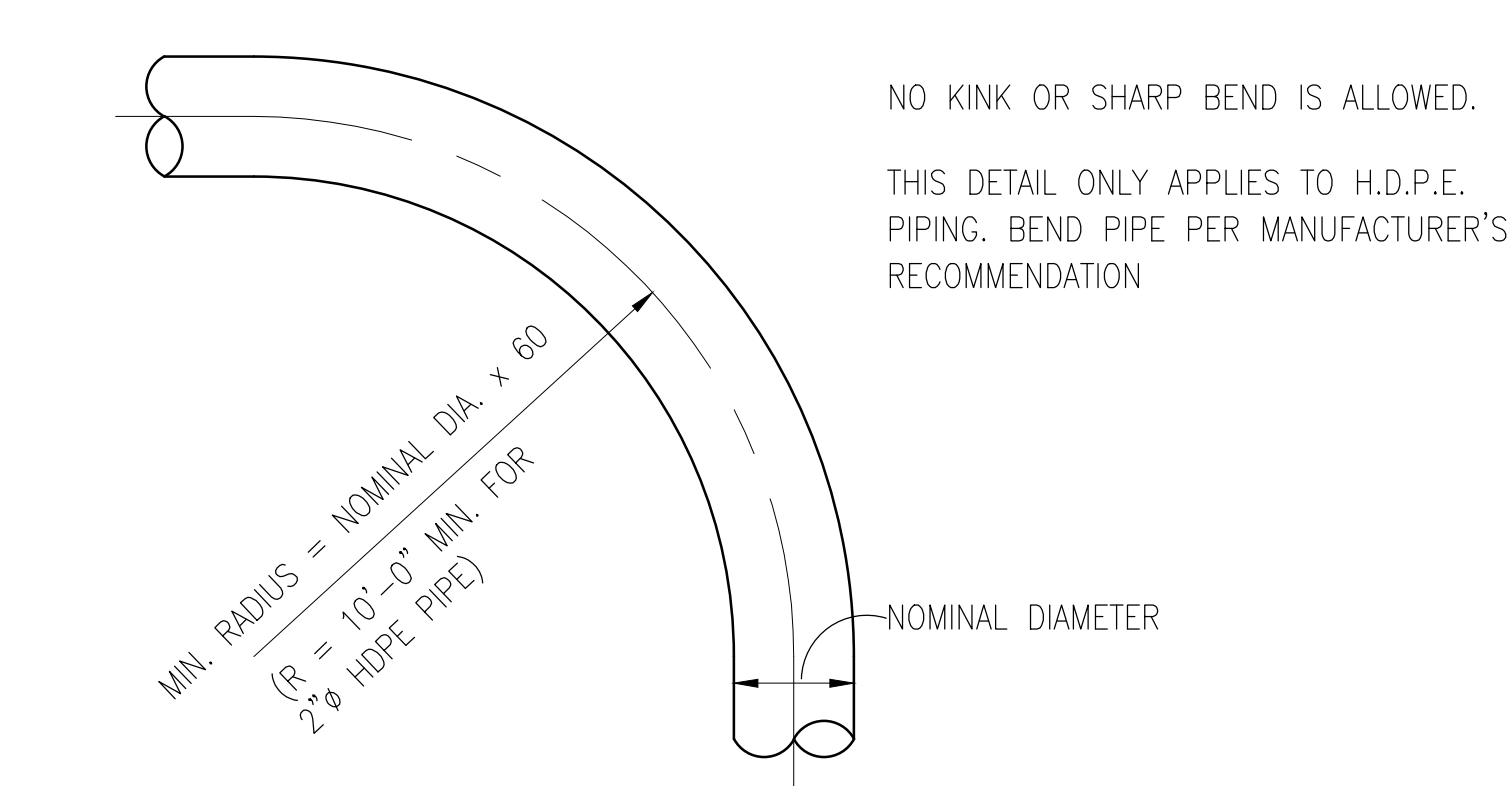
5 CATCH BASIN WITH SUMP BOX
SCALE: NOT TO SCALE



1 TYPICAL CONCRETE DRIVEWAY
SCALE: NOT TO SCALE



2 GAS LINE TRENCH
SCALE: NOT TO SCALE



3 PIPE BENDING DETAIL
SCALE: NOT TO SCALE

YEN WEN FANG
LICENSED PROFESSIONAL ENGINEER
Exp. 04/30/24
No. 9361-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Yen Wen Fang
SIGNATURE

GENERAL CONTRACTOR:
DATE: 07/11/22
DATE: 12/19/22
REVISIONS
NO. 1
DESCRIPTION
HAWAII DR SET
DRAINAGE COORDINATION
NO. 2

SINGLE FAMILY RESIDENCE
LOT 31 NOHEA, PHASE 1
TMK: 3-6-8-043-031
NOHEA AT MAUNA LANI, LLC
16130 VENTURA BLVD. STE 510
ENCINO, CA 91436 2538
PH: (805) 494-7704, FAX: (805) 494-1226

ENGINEERING PARTNERS
455 E. Lanikoula St.
Hilo Hawaii'i 96720
Main (808) 933-7900
www.epinc.pro
Hawaii'i | Las Vegas

DATE: 12/19/23
SCALE: As indicated
SHEET TITLE: DETAILS
SHEET NUMBER: C3.1

YEN WEN FANG

LICENSED PROFESSIONAL ENGINEER

Exp. 04/30/24

No. 9361-C

HAWAII, U.S.A.

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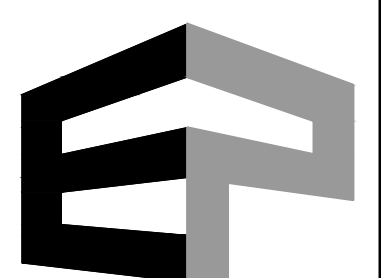


SIGNATURE

GENERAL CONTRACTOR:

REVISIONS	DESCRIPTION	DATE
1	FINAL DR SET	07/11/22
2	DRAINAGE COORDINATION	12/19/22

SINGLE FAMILY RESIDENCE
LOT 31 NOHEA, PHASE 1
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ENGINEERING PARTNERS

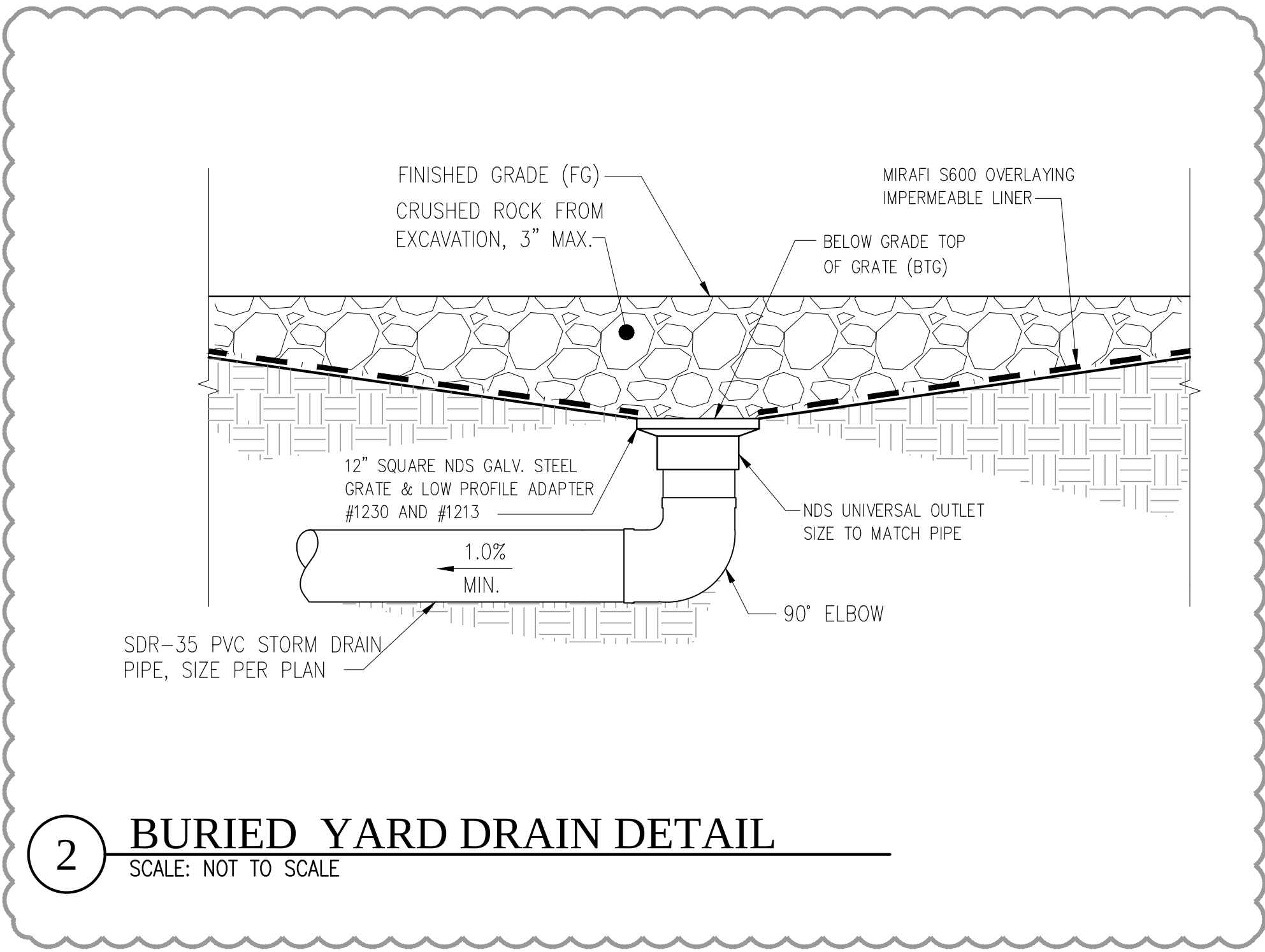
455 E. Lanikaula St.
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DATE 12/19/23

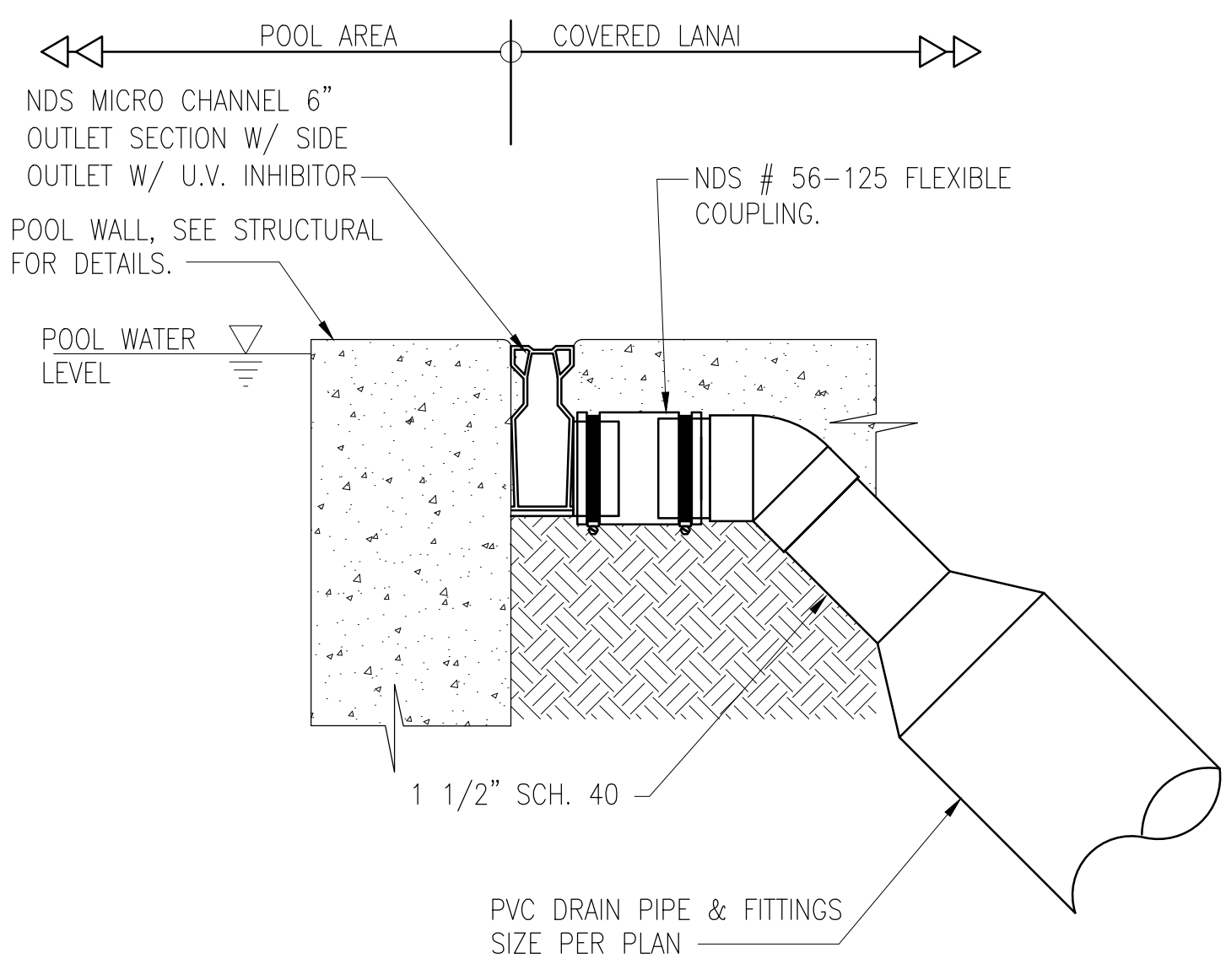
SCALE : As indicated

SHEET TITLE: DETAILS

SHEET NUMBER: C3.2



2 BURIED YARD DRAIN DETAIL
SCALE: NOT TO SCALE



1 MICRO CHANNEL DRAIN SYSTEM
SCALE: NOT TO SCALE