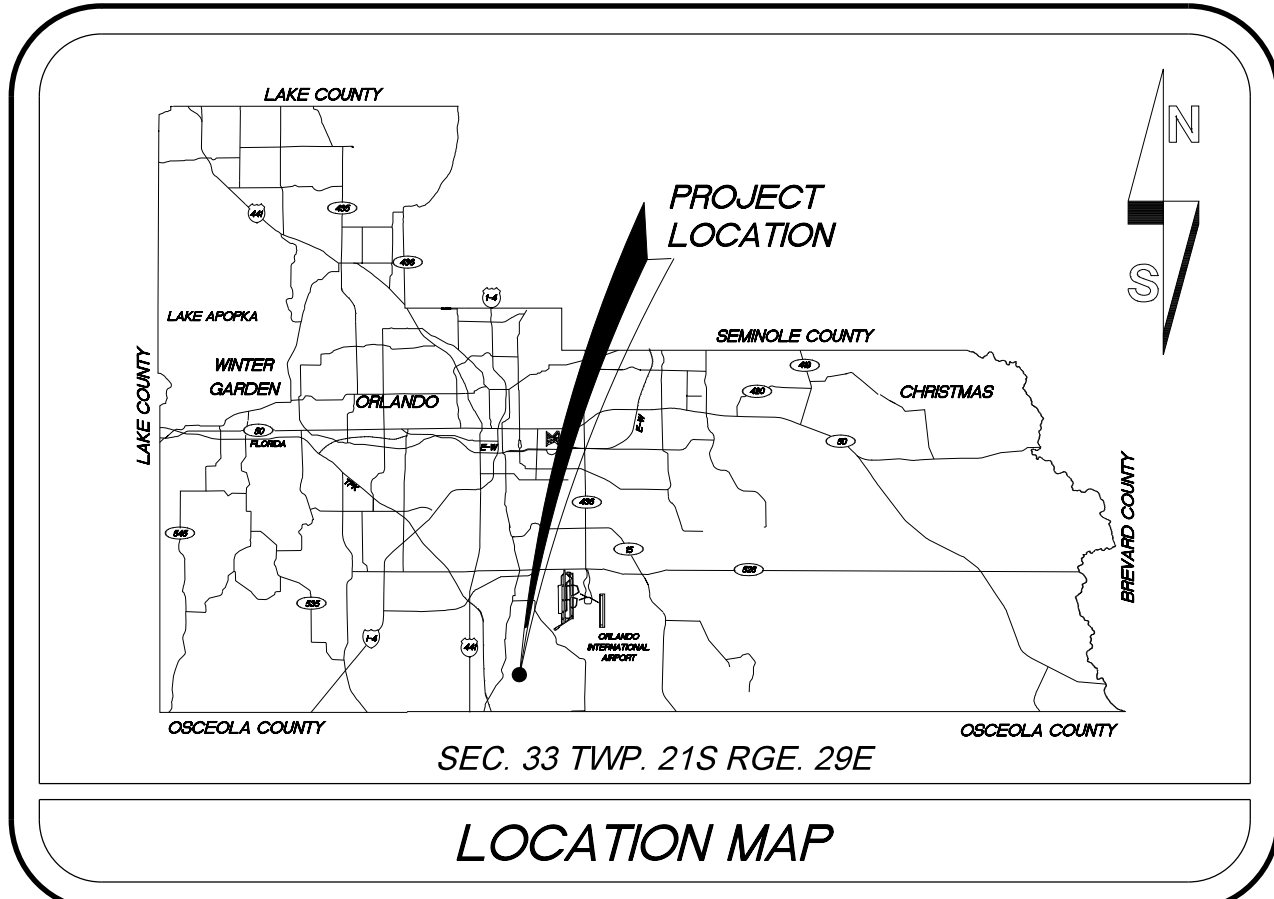




CONSTRUCTION PLANS FOR

MEADOW WOODS POND IMPROVEMENTS PROJECT

DISTRICT NO: 4 ORANGE COUNTY, FLORIDA



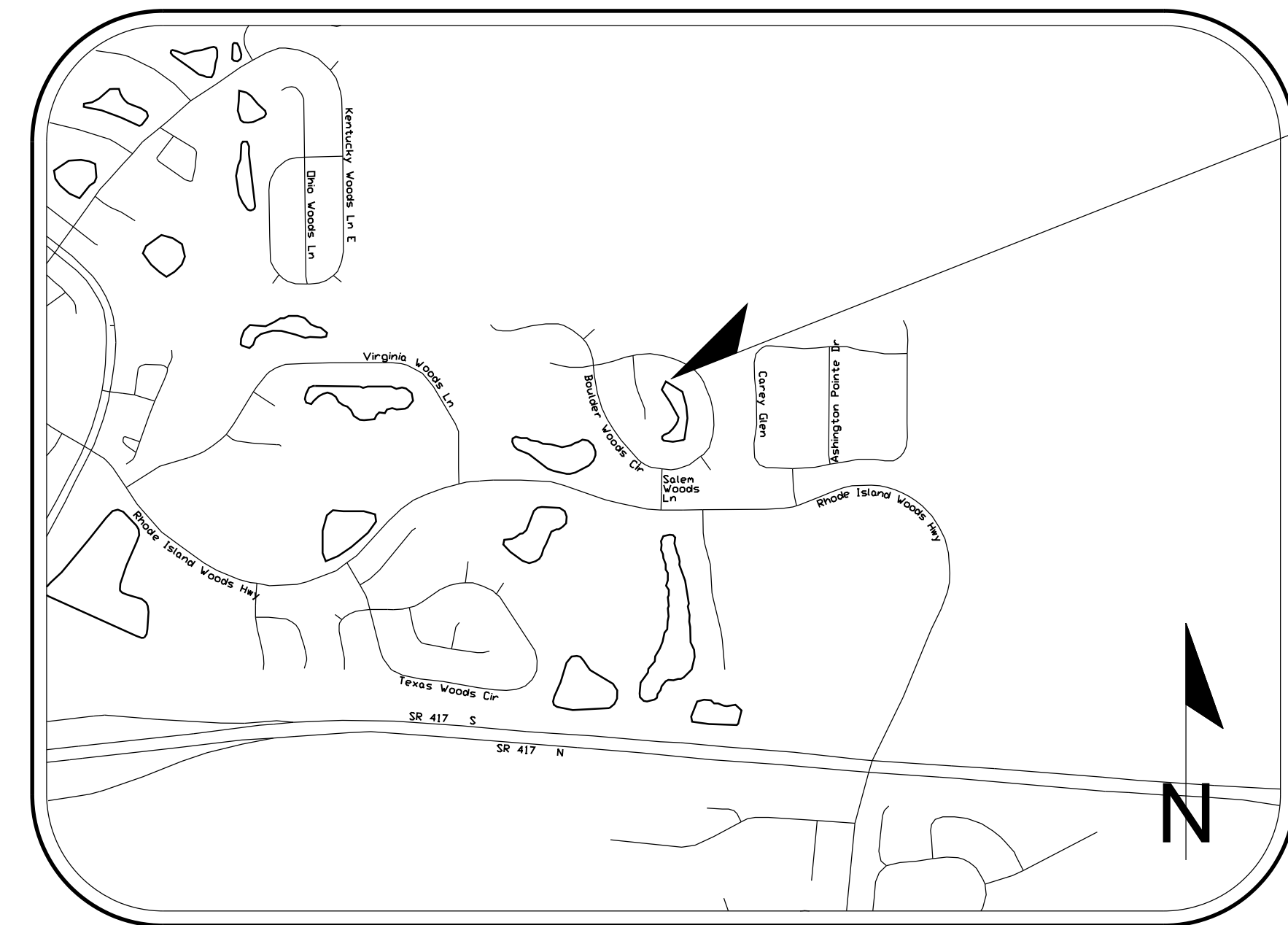
SOURCE OF BENCHMARK DATUM

ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED FROM THE FOLLOWING ORANGE COUNTY BENCHMARKS:

S1328021
FOUND BOX CUT ON THE SOUTHEAST CONCRETE PILLAR OF POWER TOWER # OUC 095663, 60' ± SOUTH OF RHODE ISLAND WOODS CIRCLE, 2000' ± NORTHWEST OF THE ENTRANCE TO MEADOW WOODS MIDDLE SCHOOL. PUBLISHED ELEVATION = 81.787 FEET (NAVD88)

B348021
FOUND BOX CUT ON THE SOUTHEAST CONCRETE PILLAR OF POWER TOWER # 74 ON THE NORTHWEST CORNER OF RHODE ISLAND WOODS CIRCLE AND SALEM WOODS LANE. PUBLISHED ELEVATION = 81.497 FEET (NAVD88)

INDEX OF SHEETS	
SHEET	DESCRIPTION
1	KEY SHEET
2	GENERAL & PAY ITEM NOTES
3	SURVEY
4	SURVEY
5	LAYOUT & CONTROL STRUCTURE DETAILS
6	SPECIAL DETAILS (THIRSTY DUCK ER-202H)



PROJECT LOCATION

GOVERNING STANDARDS AND SPECIFICATIONS :
FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, DATED 2014.

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2014 AS AMENDED BY CONTRACT DOCUMENTS.

NOTE

PLANS WERE PREPARED ACCORDING TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLANS PREPARATION. NEEDS, CONDITIONS AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE PROJECT DESIGN. THE COUNTY'S REPRESENTATIVE WILL ADDRESS CHANGES AND NEEDS WITH THE PROPERTY OWNER OR THEIR REPRESENTATIVES. CONTRACTOR SHALL WORK WITH THE COUNTY'S REPRESENTATIVE IN ADDRESSING AND MEETING NEEDS AND CONDITIONS THAT MAY HAVE CHANGED SINCE PLANS PREPARATION.

CERTIFICATION TO PLANS

I HEREBY CERTIFY THAT THE DESIGN FOR THIS PROJECT AND THE ATTACHED CONSTRUCTION PLANS COMPLY WITH THE REQUIREMENTS OF SECTION 336.045 OF THE FLORIDA STATUTES AND ARE IN SUBSTANTIAL CONFORMANCE WITH THE STANDARDS CONTAINED IN THE EDITION OF THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" IN EFFECT ON THIS DATE AS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PURSUANT TO SUBSECTION 336.045(1) OF THE FLORIDA STATUTES.

DATE: _____ ENGINEER: _____
ROBERT B. GAYLORD, P.E.

TERESA JACOBS, COUNTY MAYOR

BOARD OF COUNTY COMMISSIONERS

S. SCOTT BOYD	DISTRICT 1
BRYAN NELSON	DISTRICT 2
PETE CLARKE	DISTRICT 3
JENNIFER THOMPSON	DISTRICT 4
TED EDWARDS	DISTRICT 5
VICTORIA P. SIPLIN	DISTRICT 6

MARK V. MASSARO, P.E. PUBLIC WORKS DIRECTOR

PROJECT LENGTH:	FEET
TOTAL LENGTH:	50 +/-

UTILITIES ENCOUNTERED

POTABLE WATER (OC UTILITIES):	407-254-9700
SANITARY SEWER (OC UTILITIES):	407-254-9700
ELECTRIC (DISTRIBUTION):	407-942-9421
ELECTRIC (TRANSMISSION):	407-942-9498
TELEPHONE / CABLE (BRIGHHOUSE):	407-532-8509
TELEPHONE / CABLE (AT&T):	954-249-0558

PREPARED BY:
SAI SINGHOFEN & ASSOCIATES, INC.
11723 ORPINGTON STREET, SUITE 100
ORLANDO, FLORIDA 32817
PH: (407) 679-3001
FAX: (407) 679-2691
DBPR NO. 5112

REVISIONS	DATE	BY

DESIGNED BY: AGH/RBG
DRAWN BY: BJG
CHECKED BY: AGH/RBG
APPROVED BY: RBG
PROJECT NO: 2013-025.20

SHEET 1

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH AND CONFORM TO THE MOST STRINGENT REQUIREMENT OF THE PROJECT SPECIFICATION, THE 2014 EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (FDOT), AND SUPPLEMENTS THERETO, AND ORANGE COUNTY ROAD CONSTRUCTION SPECIFICATIONS.
- ~~SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THIS INFORMATION MAY NOT ACCURATELY REFLECT ACTUAL SOIL CONDITIONS AS TO THE DEPTH, EXTENT, OR CHARACTER OF THE MATERIAL TO BE ENCOUNTERED IN CONSTRUCTION OF THE PROJECT AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE OF THE ENGINEER IF ADDITIONAL INFORMATION IS AVAILABLE, TO MAKE ARRANGEMENTS TO REVIEW SAME PRIOR TO BIDDING, AND TO MAKE HIS OWN DETERMINATION AS TO ALL SUBSURFACE CONDITIONS.~~
- ALL PERSONAL PROPERTY, EXCEPT MAIL BOXES, WITHIN THE RIGHT-OF-WAY NOT RELOCATED BY THE PROPERTY OWNER SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS. MAIL BOXES SHALL BE RELOCATED BY THE CONTRACTOR IN ACCORDANCE WITH F.D.O.T. DESIGN STANDARD 532. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICE OF THE PAY ITEM FOR CLEARING AND GRUBBING.
- THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. APPROVAL OF DISPOSAL SITES SHALL BE OBTAINED FROM ORANGE COUNTY PRIOR TO DISPOSAL. ALL EXCESS MATERIAL IS THE PROPERTY OF THE CONTRACTOR.
- SOD IN DISTURBED AREAS SHALL MATCH EXISTING TYPE SOD, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ~~INSTALL A 4" MUCK BLANKET OR TOPSOIL TREATMENT ON ALL PERMANENT GRASS AREAS. COST TO BE INCLUDED IN CONTRACT UNIT PRICE FOR SOD.~~
- ~~SOD ALL SLOPES 2:1 OR STEEPER.~~
- ~~SAW CUT CONCRETE DRIVEWAYS AS REQUIRED FOR CONSTRUCTION.~~
- ~~ALL PAVEMENT OFFSETS SHOWN ARE TO PROPOSED SURVEY BASELINE OF CONSTRUCTION. ALL RADII AND DIMENSIONS ARE TO PROPOSED EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.~~
- ~~FOR STABILIZATION AT TURNOUTS AND DRIVEWAY CONNECTIONS SEE STANDARD INDEX No. 515 AND TYPICAL SECTIONS FOR DEPTH AND LBR.~~
- ~~DRIVEWAY LOCATIONS AND WIDTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY AS DIRECTED BY THE ENGINEER.~~
- THE CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH REQUIREMENTS OF THE VARIOUS PERMITS INCLUDED IN THE BID DOCUMENTS. PAYMENT IS INCLUDED IN THE BID PRICE FOR PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION.
- THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYED INFORMATION. THE INFORMATION MAY NOT REFLECT ACTUAL CONDITIONS OR BE ALL INCLUSIVE REGARDING ALL UTILITIES IN THE AREA, EITHER IN SERVICES OR ABANDONED, OR THAT THE UTILITIES ARE IN THE HORIZONTAL OR VERTICAL LOCATIONS SHOWN. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH PROJECT CONSTRUCTION. PRIOR TO ORDERING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL DETERMINE IF DRAINAGE/UTILITY CONFLICTS EXIST. INFORMATION ON CONFLICTS IS TO BE SUBMITTED TO THE ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY FOR RESOLUTION. DAMAGE TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S WORK OR HIS SUBCONTRACTORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, PAY ALL FINES, PAY ALL FEES, AND ALL OTHER COSTS ASSOCIATED WITH RESTORING THE UTILITY.
- PRIOR TO COMMENCEMENT OF WORK CONTRACTOR SHALL CALL SUNSHINE ONE 48 HOURS IN ADVANCE OF PERFORMING ANY UTILITY ADJUSTMENTS OR RELOCATIONS. SUNSHINE ONE PHONE NUMBER IS 1-800-432-4770.
- UTILITIES ARE TO BE ADJUSTED BY OTHERS OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY ALL GAS UTILITY COMPANIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION AS REQUIRED BY CHAPTER 77-153 OF THE FLORIDA STATUTES. MAPS SHOW ONLY THE APPROXIMATE LOCATION OF GAS MAINS OR SERVICE LINES. THE ONLY SAFE AND PROPER WAY TO LOCATE GAS FACILITIES IS BY AN ON-SITE INSPECTION BY T.E.C.O. GAS SYSTEMS. EXCAVATORS ARE INSTRUCTED TO TELEPHONE US AT 407-425-4661 TWO WORKING DAYS BEFORE DIGGING IN A CONSTRUCTION AREA.
- ALL DRAINAGE PIPES SHALL BE STEEL REINFORCED CONCRETE PIPE, CLASS III, UNLESS OTHERWISE NOTED.
- MEASUREMENT OF DRAINAGE PIPE FOR PAYMENT SHALL BE DETERMINED FROM ACTUAL LENGTHS INSTALLED.
- ALL MANHOLE COVERS SHALL INCLUDE THE ORANGE COUNTY LOGO AND BE IDENTIFIED AS "ORANGE COUNTY SANITARY", "ORANGE COUNTY STORM", OR "ORANGE COUNTY WATER", AS APPROPRIATE.
- ALL INLET/MANHOLE - PIPE JOINTS SHALL BE FILLED WITH NON-SHRINK GROUT, COVERED WITH AN ASPHALT MASTIC COATING, AND WRAPPED WITH A FILTER FABRIC MATERIAL PER SECTION 13.03.03 OF THE ORANGE COUNTY ROAD CONSTRUCTION SPECIFICATIONS. ALL PIPE JOINTS IN THIS PROJECT SHALL BE WRAPPED PER FDOT STANDARD INDEX No. 280 OR AS DIRECTED BY THE ENGINEER COST TO BE INCLUDED IN THE COST OF THE PIPE CULVERT.
- ALL CURB INLETS, DITCH BOTTOM INLETS, AND MANHOLES SHALL HAVE TRAFFIC BEARING FRAMES AND COVERS OR GRATES MEETING HS-20 LOADING REQUIREMENTS.
- ALL EXISTING DRAINAGE STRUCTURES AND PIPES IF ABANDONED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED, UNLESS OTHERWISE SHOWN IN THE PLANS OR DIRECTED BY THE ENGINEER.
- DESIGN CHANGES OF PIPE INVERTS NOT EXCEEDING PLUS OR MINUS ONE FOOT WILL NOT BE CONSIDERED AS A BASIS FOR ADDITIONAL COMPENSATION FOR THE PERTINENT PIPE BID ITEM OR FOR MODIFICATION OF PRECAST STRUCTURES.
- ALL (P.R.M.'s) IRONS AND MONUMENTS SHOWN ON PLANS, OR FOUND, SHALL BE PRESERVED. THOSE SHOWN IN PROPOSED PAVEMENT SHALL BE PROTECTED WITH A CAST IRON VALVE BOX.
- ANY U.S.C. AND G.S. MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, ORANGE COUNTY SURVEY SECTION 407-836-7940 AND BOTH SHALL NOTIFY:
STATE GEODETIC ADVISOR
3900 COMMONWEALTH BOULEVARD, SUITE 309,
TALLAHASSEE, FL
850-245-2606

- PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE COUNTY SURVEYOR, WITHOUT DELAY, BY TELEPHONE 407-836-7940). THE CONTRACTOR SHALL PROVIDE WRITTEN FOLLOW UP CONFIRMATION WITHIN 48 HOURS OF TELEPHONE NOTIFICATION.
- PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO ORANGE COUNTY HIGHWAY CONSTRUCTION DEPARTMENT A SET OF FIELD NOTES VERIFYING THE BENCHMARK ELEVATIONS AND THE REFERENCE POINT TIES SHOWN ON THE TITLE SHEET AND PLAN AND PROFILE SHEETS, AND/OR A SET OF FIELD NOTES FOR ALL ADDITIONAL BENCHMARK AND REFERENCE POINT TIES PROPOSED TO BE USED IN CONSTRUCTING THE PROJECT WITH THEIR LOCATION, DESCRIPTION AND ELEVATION, BASED ON ORANGE COUNTY DATUM. ALL SUBMITTALS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
- ~~TO MEET ADA REQUIREMENTS, ALL SIDEWALK CONSTRUCTION SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.~~
- ~~FOR PEDESTRIAN CURB CUT RAMPS DETAILS, REFER TO FDOT STANDARD INDEX 304 NOMENCLATURE SHOW IN THE PLANS REFERS TO THE RAMP TYPES IDENTIFIED IN INDEX 304.~~
- THE CONTRACTOR SHALL RELOCATE EXISTING TRAFFIC SIGNS AS REQUIRED DURING CONSTRUCTION. SIGNS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE COUNTY. THE CONTRACTOR SHALL REMOVE AND STORE EXISTING TRAFFIC SIGNS THAT ARE NOT USED DURING CONSTRUCTION. THE CONTRACTOR SHALL RE-INSTALL THE STORED SIGNS AS SHOWN ON THE SIGNING PLANS OR AS DIRECTED BY THE ENGINEER. SIGNS NOT TO BE RE-INSTALLED SHALL BE DELIVERED TO ORANGE COUNTY'S TRAFFIC SIGN SHOP. DAMAGE SIGNS SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO ORANGE COUNTY. COST OF RELOCATION, MAINTENANCE, REMOVAL AND LEFTOVER SHALL BE INCLUDED IN THE BID PRICE FOR MAINTENANCE OF TRAFFIC.
- ALL EXCAVATIONS SHALL BE REQUIRED TO CONFORM TO THE PROVISION OF PART IV OF CHAPTER 553.60, F.S., ALSO KNOWN AS THE "TRENCH SAFETY ACT" TO PROTECT EXISTING PAVEMENT, STRUCTURES, FOUNDATIONS, AND CONSTRUCTION PERSONNEL DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR IS TO MAINTAIN UNINTERRUPTED ACCESS TO ALL DRIVEWAYS AND SIDE STREETS AT ALL TIMES AND IS TO NOTIFY PROPERTY OWNERS FIVE DAYS PRIOR TO STARTED CONSTRUCTION.
- ~~THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING PAVEMENT ELEVATIONS OF ALL DRIVEWAYS AND SIDEWALKS TO MATCH THE PROPOSED PAVEMENT TO THE EXISTING.~~
- ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAT THE CONDITION EXISTING. COST TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- ALL CONCRETE SHALL BE MIN. OF 3,000 PSI.
- ~~NOTIFY THE FDOT OFFICE 48 HOUR ADVANCE NOTICE PRIOR TO STARTING WORK.~~
- ~~MAINTENANCE OF TRAFFIC WHILE WORKING WITHIN THE FDOT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE F.D.O.T. ROADWAY STANDARD 600 SERIES.~~
- ~~ANY DAMAGE CAUSED TO FDOT RIGHT OF WAY OR FACILITIES DUE TO CONSTRUCTION ASSOCIATED WITH THIS PROJECT SHALL BE REPAIRED BY CONTRACTOR.~~
- ~~NO WORK WILL BE ALLOWED UNTIL AGREEMENT IS SIGNED BY BOTH PARTIES.~~

SUPPLEMENTAL GENERAL NOTES:

- DISTURBED AREAS SHALL BE COMPACTED (AS A MINIMUM) EQUAL TO ADJACENT UNDISTURBED GROUND EXCEPT WHEN OTHERWISE SPECIFIED. DISTURBED AREAS AND PROPERTIES ADJACENT TO WORK ZONES SHALL BE GRADED TO DRAIN WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- SOD ALL DISTURBED AREAS UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND THE TRANSPORTATION OF ERODED MATERIALS OFFSITE. THE CONTRACTOR SHALL SUBMIT AN EROSION CONTROL PLAN AT THE RECONSTRUCTION CONFERENCE FOR APPROVAL BY THE ENGINEER. THE EROSION CONTROL PLAN SHALL ADDRESS THE INSTALLATION AND MAINTENANCE OF ALL TEMPORARY AND PERMANENT SEDIMENT AND EROSION CONTROL DEVICES TO BE UTILIZED DURING EACH PHASE OF CONSTRUCTION, INCLUDING TREE REMOVAL, CLEARING AND GRUBBING, AND THE HAULING OF EXCAVATED MATERIALS AND BACKFILL. THE PLAN SHALL ALSO DETAIL THE EROSION CONTROL MEASURES TO BE EMPLOYED AT ALL STOCKPILE AND CONSTRUCTION STAGING AREAS.
- PRIOR TO ANY SCHEDULED INTERRUPTION OF UTILITY SERVICE, THE CONTRACTOR SHALL COORDINATE SUCH INTERRUPTION WITH THE UTILITY PROVIDER AND SHALL PROVIDE A MINIMUM 24-HOUR NOTICE TO THE AFFECTED PARTIES. IN THE CASE OF A WATER MAIN SHUT DOWN, A MINIMUM 24-HOUR NOTICE ALSO SHALL BE PROVIDED TO THE FIRE DEPARTMENT.
- NO TRENCHES SHALL BE ALLOWED TO REMAIN OPEN OVERNIGHT.
- ALL EXISTING FENCES THAT ARE REMOVED ARE TO BE REPLACED OR RELOCATED. ALL FENCES DAMAGED BY CONSTRUCTION ACTIVITIES ARE TO BE REPLACED WITH NEW FENCING OF THE SAME TYPE AND MATERIAL. ALL COSTS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR CLEARING AND GRUBBING, UNLESS NOTED OTHERWISE.
- WHERE THE REQUIRED MINIMUM SEPARATION BETWEEN UTILITIES IS SPECIFIED, THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- THE CONTRACTOR SHALL PROVIDE A WRITTEN AND NOTARIZED STATEMENT ON COMPANY LETTERHEAD TO CERTIFY AND WARRANT THAT "ASBESTOS WAS NOT USED IN THE MANUFACTURING, CONSTRUCTION, AND PLACEMENT OF ANY PART OF THE WORK OF THE PROJECT".
- NO BURNING SHALL BE DONE EXCEPT UPON APPROVAL BY THE JURISDICTIONAL MUNICIPALITY.
- THE LIMITS OF CONSTRUCTION ARE DEFINED AS ROADWAY RIGHTS-OF-WAY, ORANGE COUNTY PROPERTIES, DRAINAGE RIGHTS-OF-WAY, PERMANENT DRAINAGE EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS OBTAINED BY THE COUNTY.
- THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE AND LIABLE FOR ALL DAMAGE OR INJURY AS A RESULT OF HIS OPERATIONS TO ALL OTHER ADJACENT PUBLIC AND PRIVATE PROPERTY, LANDSCAPING, TREES, FENCES, UTILITIES, STRUCTURES OF ANY KIND AND APPURTENANCES DURING THE PROGRESS OF THE WORK.
- AN ENVIRONMENTAL RESOURCE PERMIT HAS BEEN ISSUED BY THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR CONSTRUCTION OF THE PROJECT (PERMIT NO. 48-00113-5).
- THE CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING A DETWATERING PERMIT FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT PRIOR TO COMMENCEMENT OF ANY DEWATERING ACTIVITIES THAT ARE REQUIRED FOR CONSTRUCTION OF THE PROJECT.

BIDFORM

COUNTY REF. NO.	ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	CONTRACT PRICE
1	101-1	MOBILIZATION	1	LS		
2	102-1	MAINTENANCE OF TRAFFIC	1	LS		
3	104-14	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	1	LS		
4	110-1-1	CLEARING AND GRUBBING	1	LS		
5	120-14	EXCAVATION, EMBANKMENT & GRADING	1	LS		
6	425-1-544	INLETS (DITCH BOTTOM TYPE D, J BOTTOM, >10')	1	EA		
7	425-1-553	INLETS (DITCH BOTTOM TYPE E, J BOTTOM, <10')	1	EA		
8	425-90-0	INLET (SPECIAL BOUYANT FLOW CONTROL DEVICE) (THIRSTY DUCK ER-202H, OR APPROVED EQUAL)	1	EA		
9	430-175-142	CONCRETE PIPE CULVERT (CLASS II, 42")	28	LF		
10	430-610-125	U-ENDWALL, STANDARD, 18", 4:1 SLOPE	1	EA		
11	430-94-3	DESILTING PIPE, 42"	300	LF		
12	570-1-2	PERFORMANCE TURF, SOD (MATCH EXISTING)	450	SY		
13	900-1	AS-BUILT CERTIFICATION	1	LS		
14	900-2	INDEMNIFICATION	1	LS		
15	900-3	GROUNDWATER - TREATMENT & DISPOSAL	60	DY		
Total =						

GENERAL PAY ITEM NOTES:

- No separate payment will be made for dewatering and pumping. The costs for dewatering and pumping shall be included in the unit price for Inlets.
- No separate payment will be made for geotextile fabric or filter fabric. The costs for these items shall be included in the unit price for pipes.

STORMWATER PAY ITEM NOTES:

101-1 MOBILIZATION
The lump sum price also shall include all costs for furnishing, installing, relocating and removing the project signs.

102-1 MAINTENANCE OF TRAFFIC
The lump sum price constitutes full compensation for all labor and materials required to implement the approved traffic control plan to safely maintain traffic around or through the work zone not included for payment under other related pay items, including warning and regulatory signs, message boards, drums, barricades, channelizing devices, temporary concrete barrier, warning lights, flaggers, and for the maintenance of existing driveways, temporary pavement, and removal and reinstallation of existing signs in conflict with construction as directed by the engineer. No adjustments will be made to the contract price for increases in contract time.

104-14 PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION
The lump sum price shall include all costs for furnishing, installing, and maintaining silt fence, temporary cofferdams, synthetic bales, floating turbidity barrier, sedimentation barriers, and temporary grassing as shown on the construction plans or directed by the Engineer. Also, includes costs for removal and disposal of captured sediment, removal and disposal of sediment off-site upon completion of construction (including any necessary permits and fees for disposal).

110-1-1 CLEARING AND GRUBBING
Partial payments shall be based upon the estimated lump sum price of clearing & grubbing work completed to the date of the estimate as determined by the Engineer. All partial estimates and payments shall be subject to correction in subsequent estimates and payment. Includes cost of removing existing structures.

120-14 EXCAVATION, EMBANKMENT, AND GRADING
Excavation, Embankment, and Grading will be paid for at the contract lump sum price. Payment shall constitute full compensation for grading of slopes, compaction, final dressing, embankment, excavation, and replacement material, and all earthwork necessary to complete the project to lines and grades shown on the plans.

425-1-544, 425-1-553, & 425-90-0 INLETS
The unit price shall constitute full compensation for all work and materials necessary for the installation of inlets. Payment includes all materials, grates, foundation preparation, covers, bolts, connecting existing pipes, grout, drainage structure inverts, Buoyant Flow Control Device (complete, Thirsty Duck ER-202H or approved equal), non-reinforced ditch pavement, 8" PVC pipe, PVC tee and caps, and all appurtenances to complete the project.

430-175-142 CONCRETE PIPE CULVERT (CLASS III, 42")
The unit price includes payment for furnishing and installing pipe, furnishing and placing select bedding and backfill, placing regular backfill, dewatering, wrapping of pipe joints with filter fabric, concrete pipe collar, shoring & bracing, restoration of pavement, and video.

430-610-125 U-ENDWALL, STANDARD, 18", 4:1 SLOPE
The unit price shall constitute full compensation for all work and materials necessary for the installation of U-Endwall. Payment includes all materials, foundation preparation, reinforcing steel, connecting existing pipes, grout, and all appurtenances to complete the project.

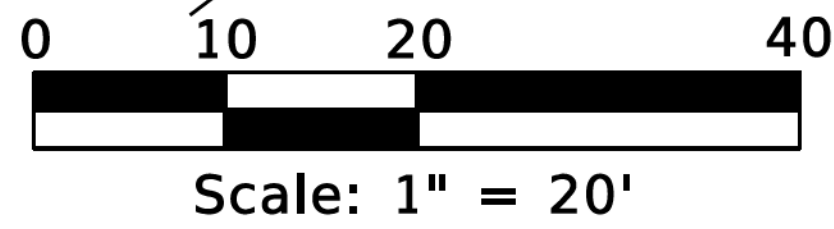
430-94-3 DESILTING PIPE, 42"
The unit price includes payment for desilting pipe, furnishing all equipment, tools and labor, disposal of silt and debris, and all incidentals necessary to satisfactorily perform the work.

570-1-2 PERFORMANCE TURF, SOD (MATCH EXISTING)
The unit price constitutes full compensation for furnishing, delivering, protecting, pegs, and installing sod, including site preparation, removal of undesirable plant species, soil amendment, top soil, application of fertilizer, planting, staking, watering, and mowing and maintenance of the area until final completion of the project.

N:\Projects\2013\2013-025\Drawings\2013-025-MW-Cover.dwg

Revision	Date	Approved	Designed by: RBG/AGH	 <p>SINGHOFEN & ASSOCIATES, INC. STORMWATER MANAGEMENT AND CIVIL ENGINEERING 11223 Orpington Street, Suite 100 Orlando, FL 32817 Ph: (407) 679-3001 Fax: (407) 679-2691 DBPR No. 5112</p>	<p>ORANGE COUNTY STORMWATER MANAGEMENT DIVISION</p>	<p>MEADOW WOODS POND IMPROVEMENTS PROJECT</p>	<p>GENERAL & PAY ITEM NOTES</p>	<p>SHEET 2 Project No. 2013-025.20</p>
			Drawn by: BJG/AGH					
			Checked by: RBG					
			Approved by: RBG					
			Vertical Datum: 1988					

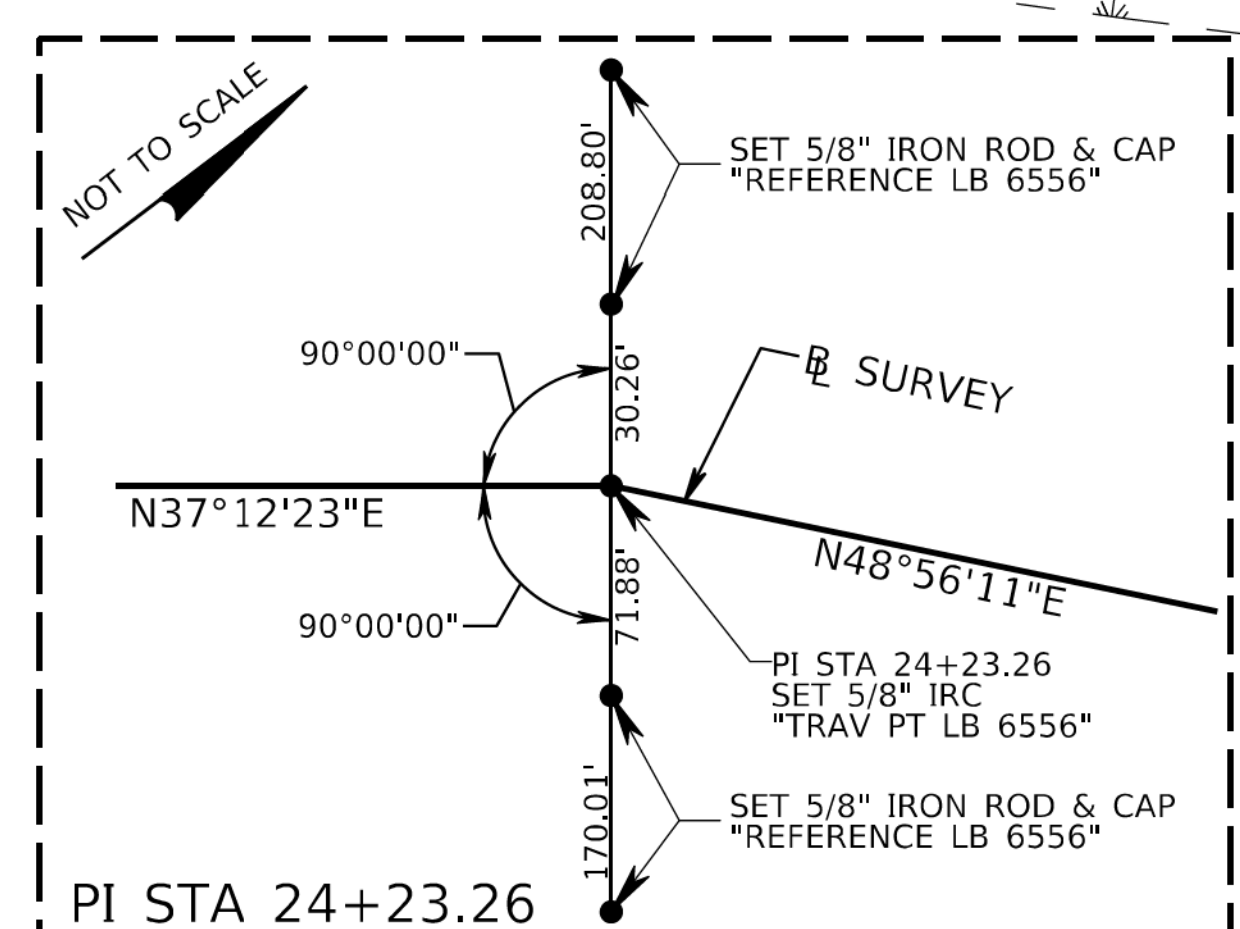
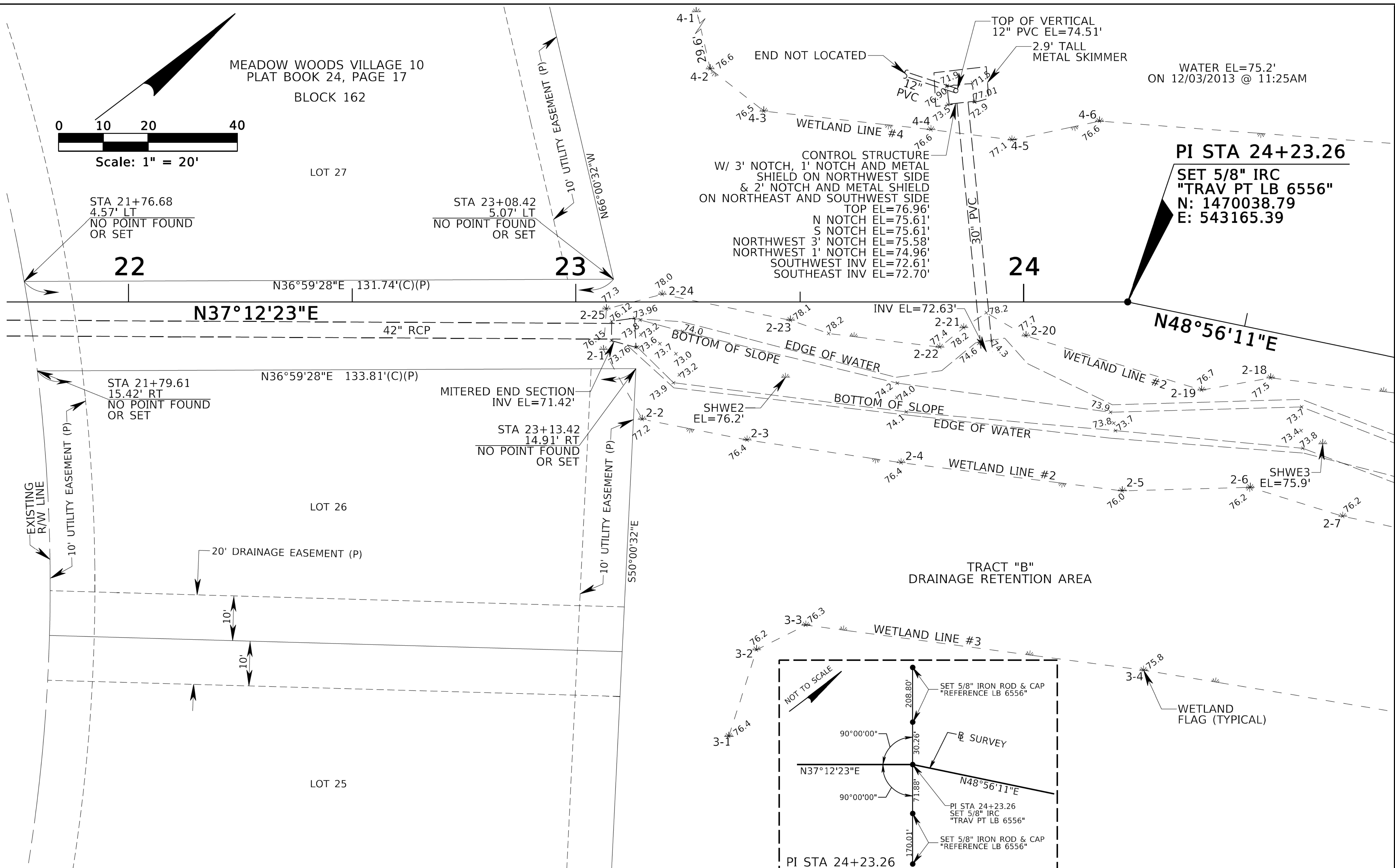
MEADOW WOODS VILLAGE 10
PLAT BOOK 24, PAGE 17
BLOCK 162



WATER EL=75.2'
ON 12/03/2013 @ 11:25AM

PI STA 24+23.26
SET 5/8" IRC
"TRAV PT LB 6556"
N: 1470038.79
E: 543165.39

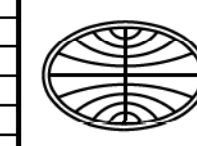
CONTROL STRUCTURE
W/ 3' NOTCH, 1' NOTCH AND METAL
SHIELD ON NORTHWEST SIDE
& 2' NOTCH AND METAL SHIELD
ON NORTHEAST AND SOUTHWEST SIDE
TOP EL=76.96'
N NOTCH EL=75.61'
S NOTCH EL=75.61'
NORTHWEST 3' NOTCH EL=75.58'
NORTHWEST 1' NOTCH EL=74.96'
SOUTHWEST INV EL=72.61'
SOUTHEAST INV EL=72.70'



TOPOGRAPHIC
SURVEY

MEADOW WOODS
DRAINAGE STUDY

REVISION	BY	DATE

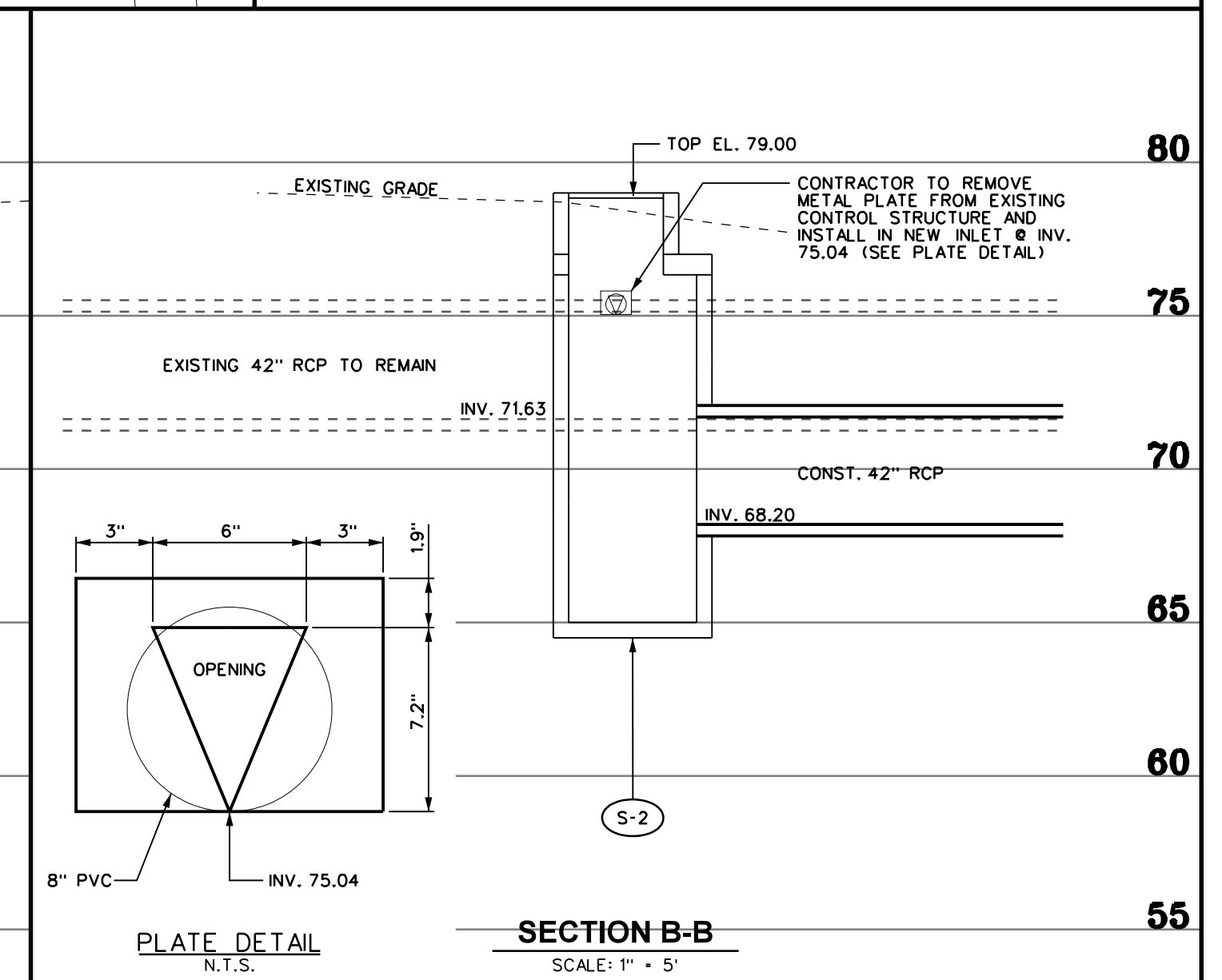
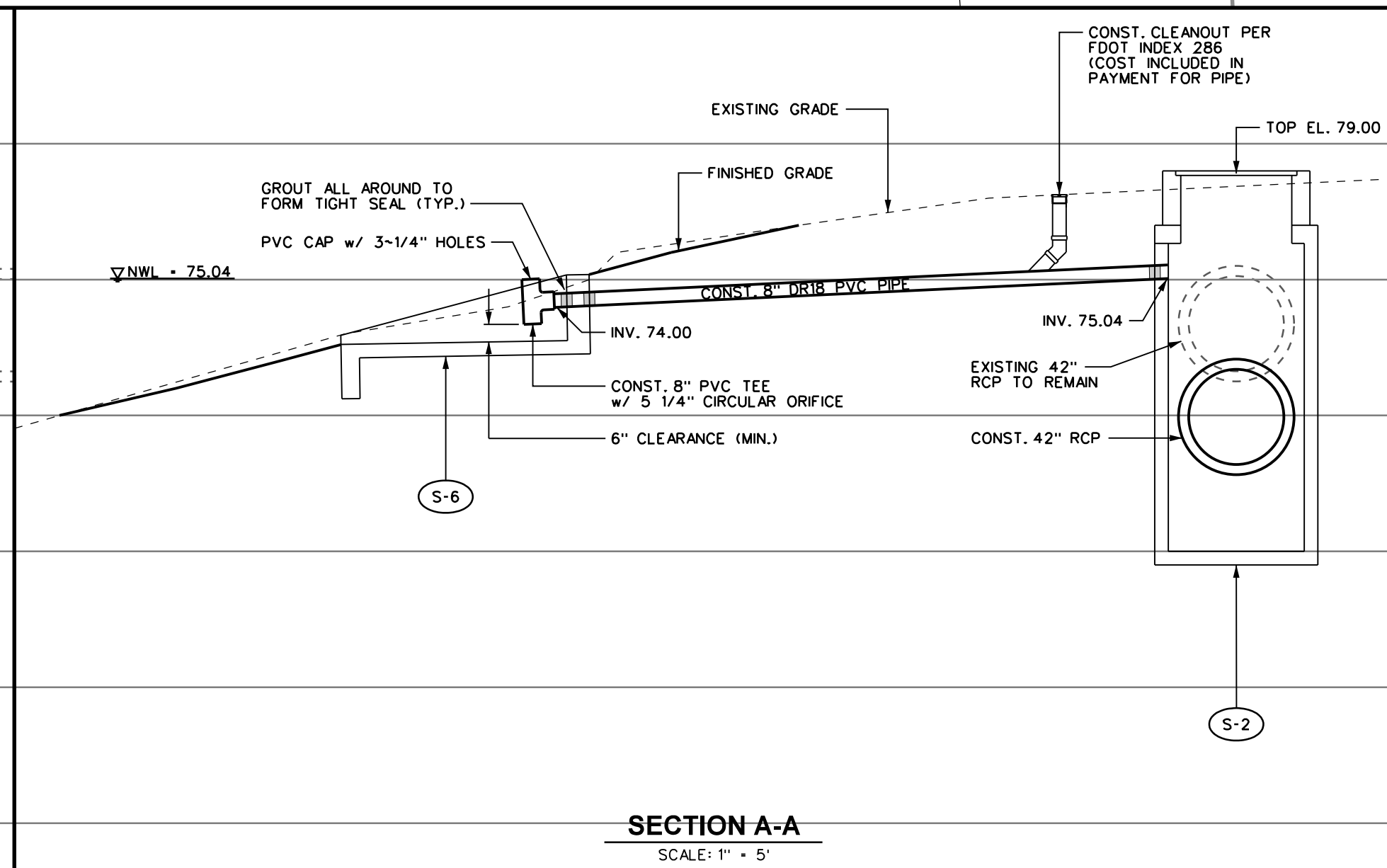
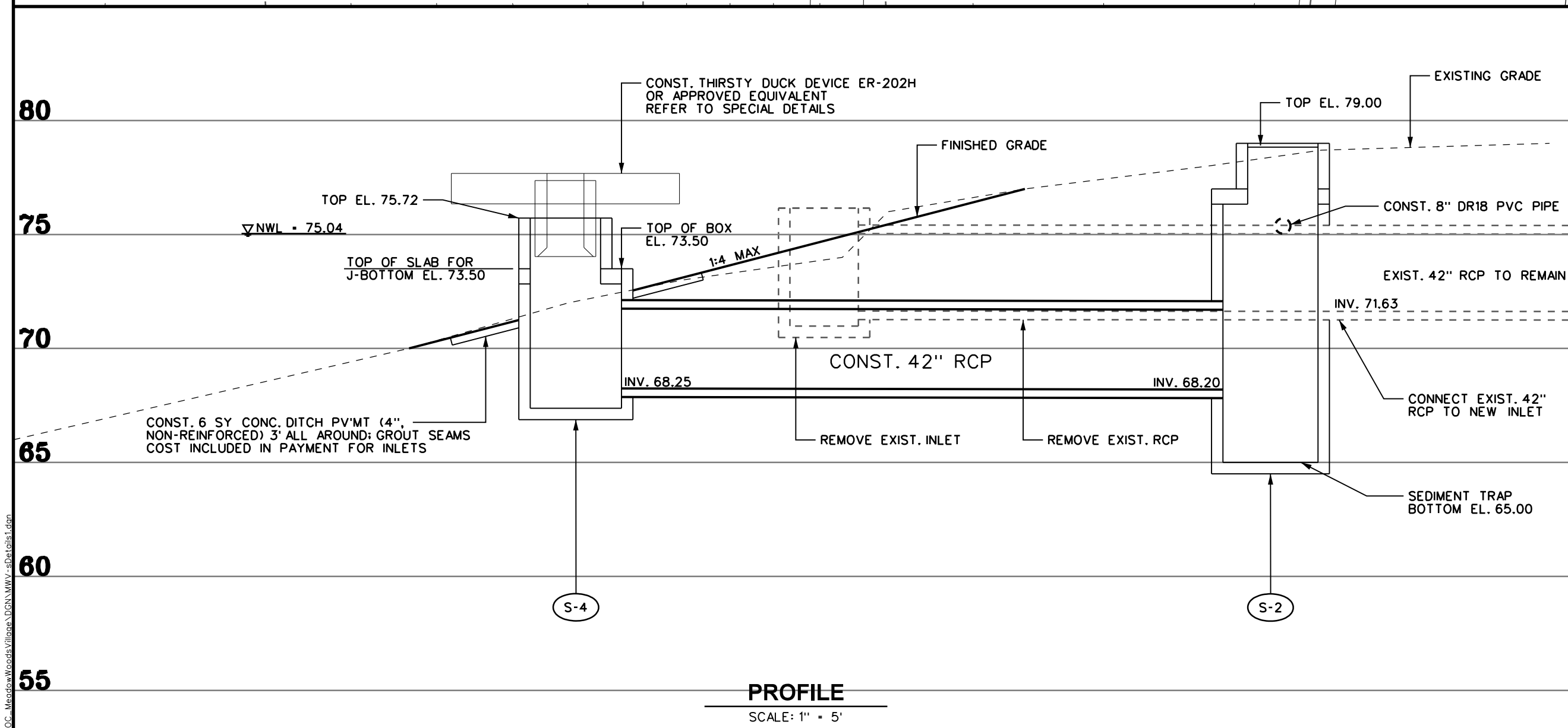
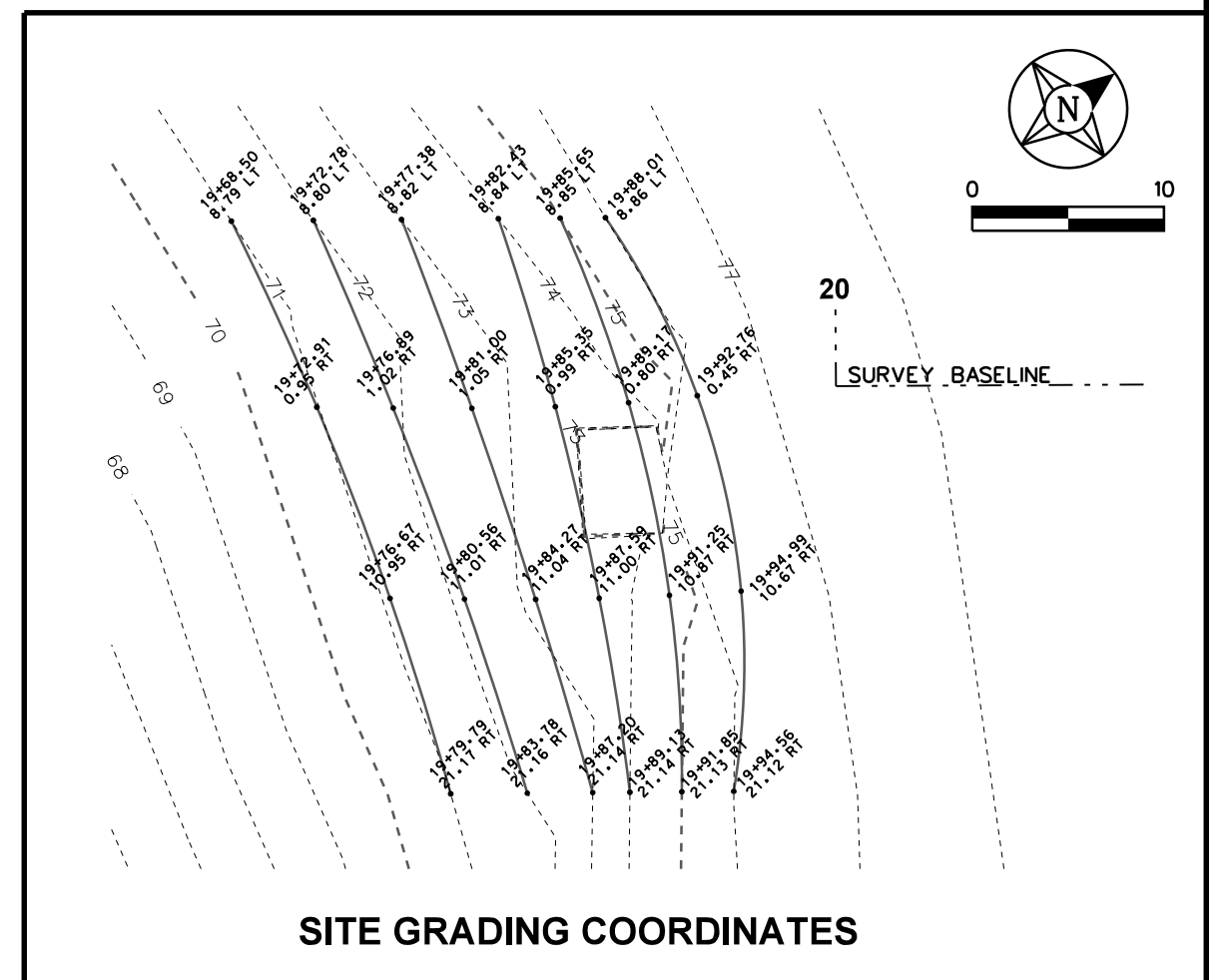
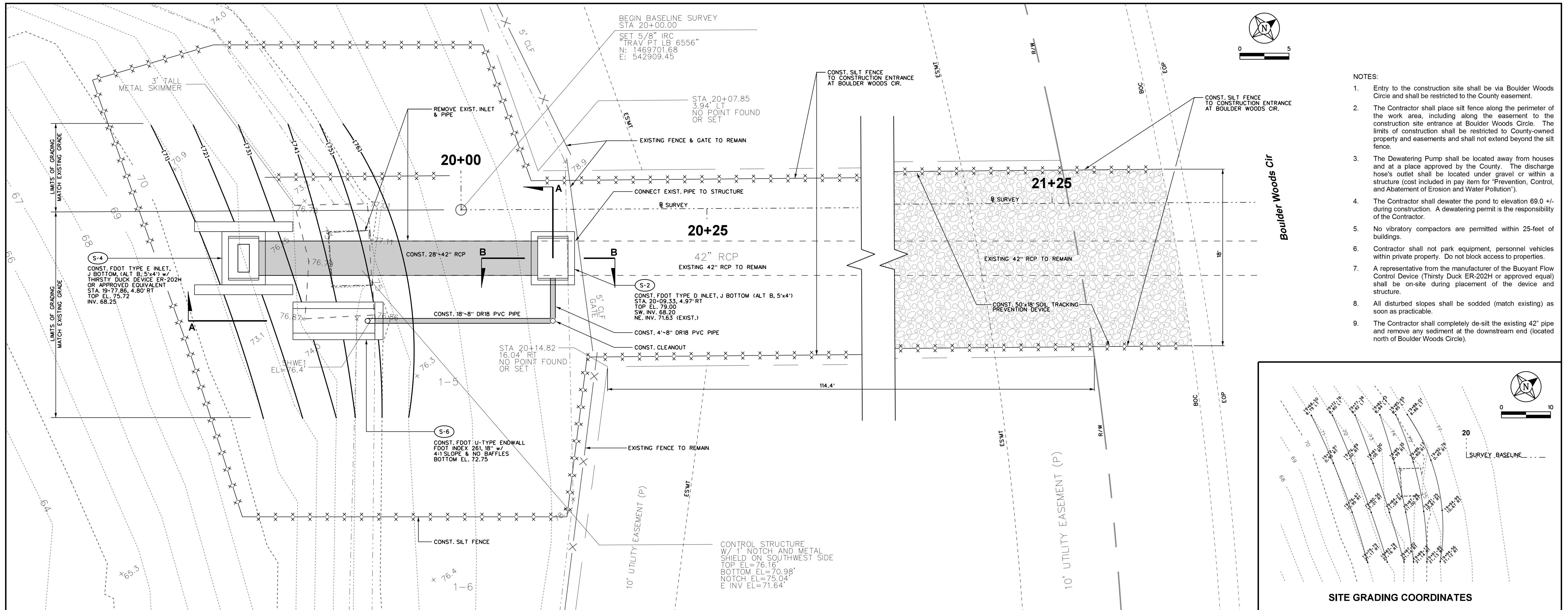


GEODATA CONSULTANTS, INC.
SURVEYING & MAPPING

2700 WESTHALL LANE
SUITE 137
MAITLAND, FLORIDA 32751
VOICE: (407) 660-2322 FAX: 660-8223

DATE:
DEC 16, 2013
PROJECT No.
S23-25

SCALE:
1"=20'
SHEET **4**



Revision	Date	Approved

Designed by: RBG/AGH
 Drawn by: BJG/AGH
 Checked by: RBG
 Approved by: RBG
 Vertical Datum: 1988

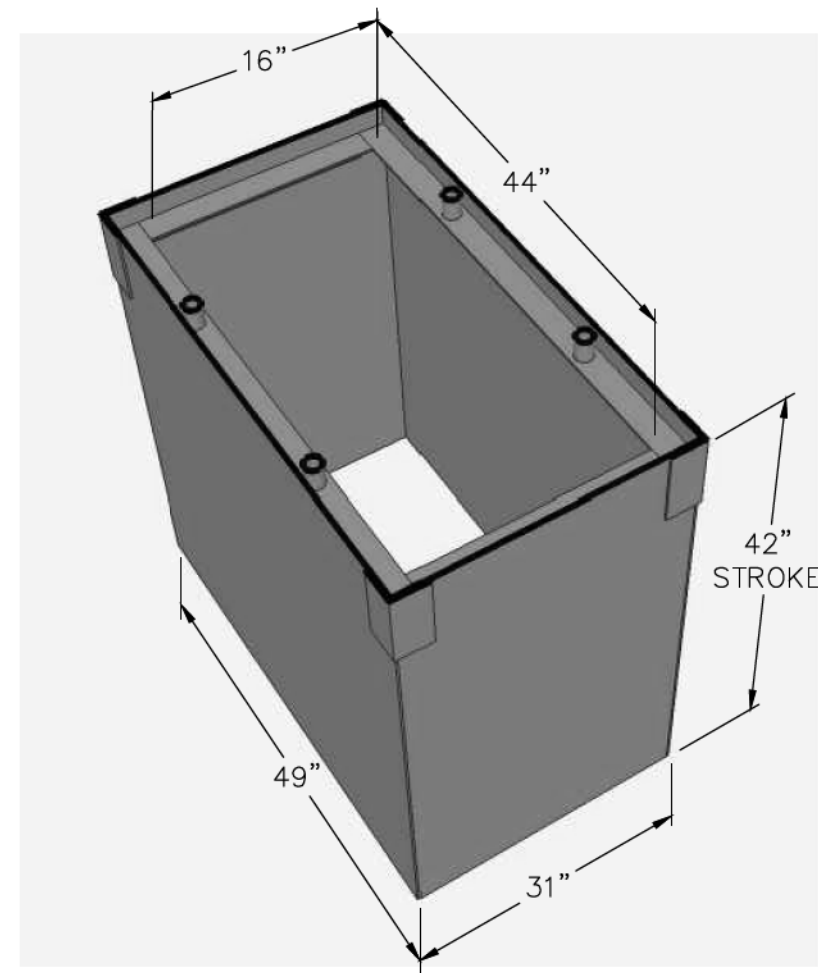
SINGHOFEN & ASSOCIATES, INC.
 STORMWATER MANAGEMENT AND CIVIL ENGINEERING

SAI
 11723 Springton Street, Suite 100
 Orlando, FL 32817
 Ph: (407) 679-3001
 Fax: (407) 679-2691
 DBPR No. 5112

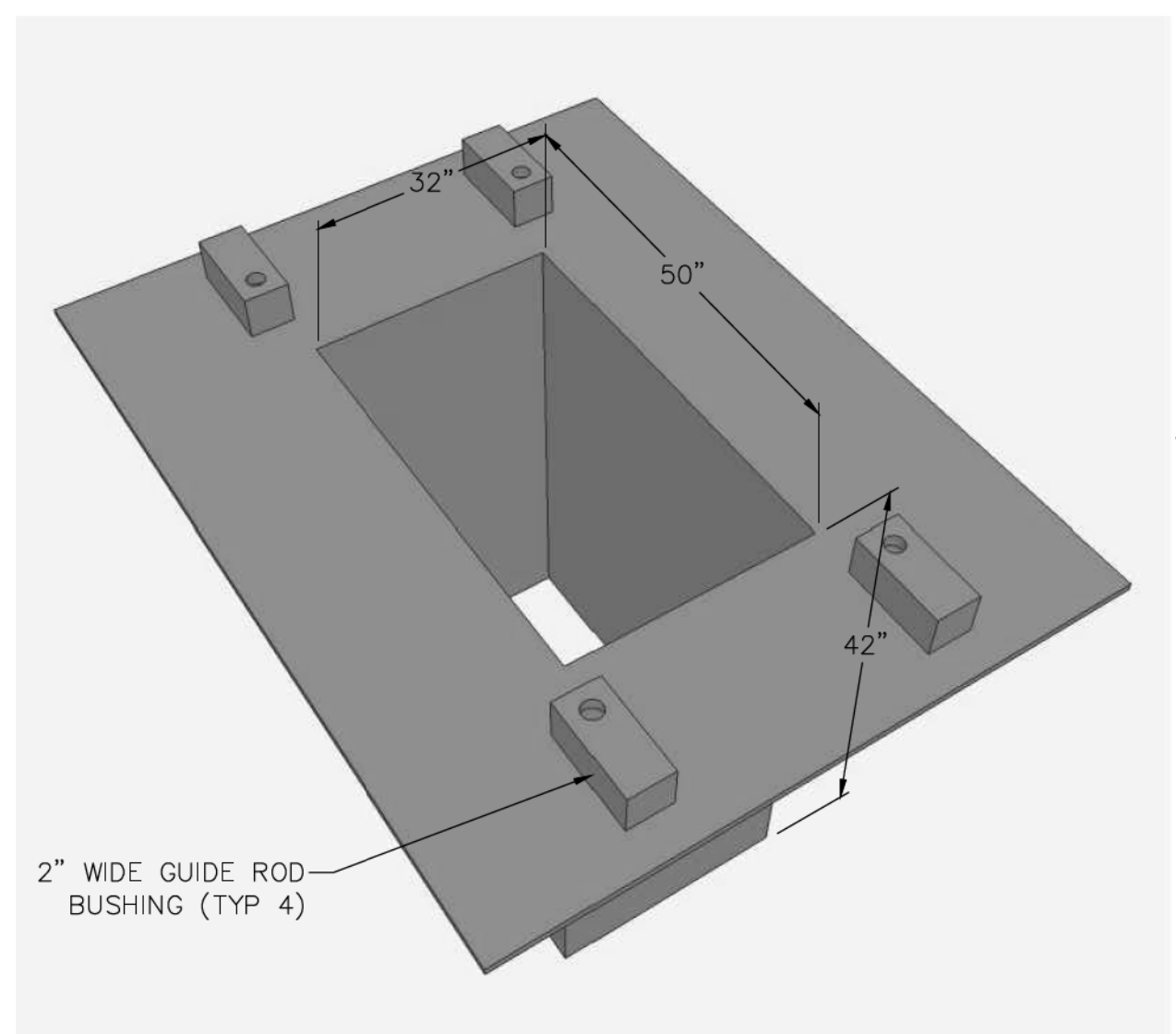
**ORANGE COUNTY
 STORMWATER MANAGEMENT DIVISION**

**MEADOW WOODS POND
 IMPROVEMENTS PROJECT**

**LAYOUT & CONTROL
 STRUCTURE DETAILS**

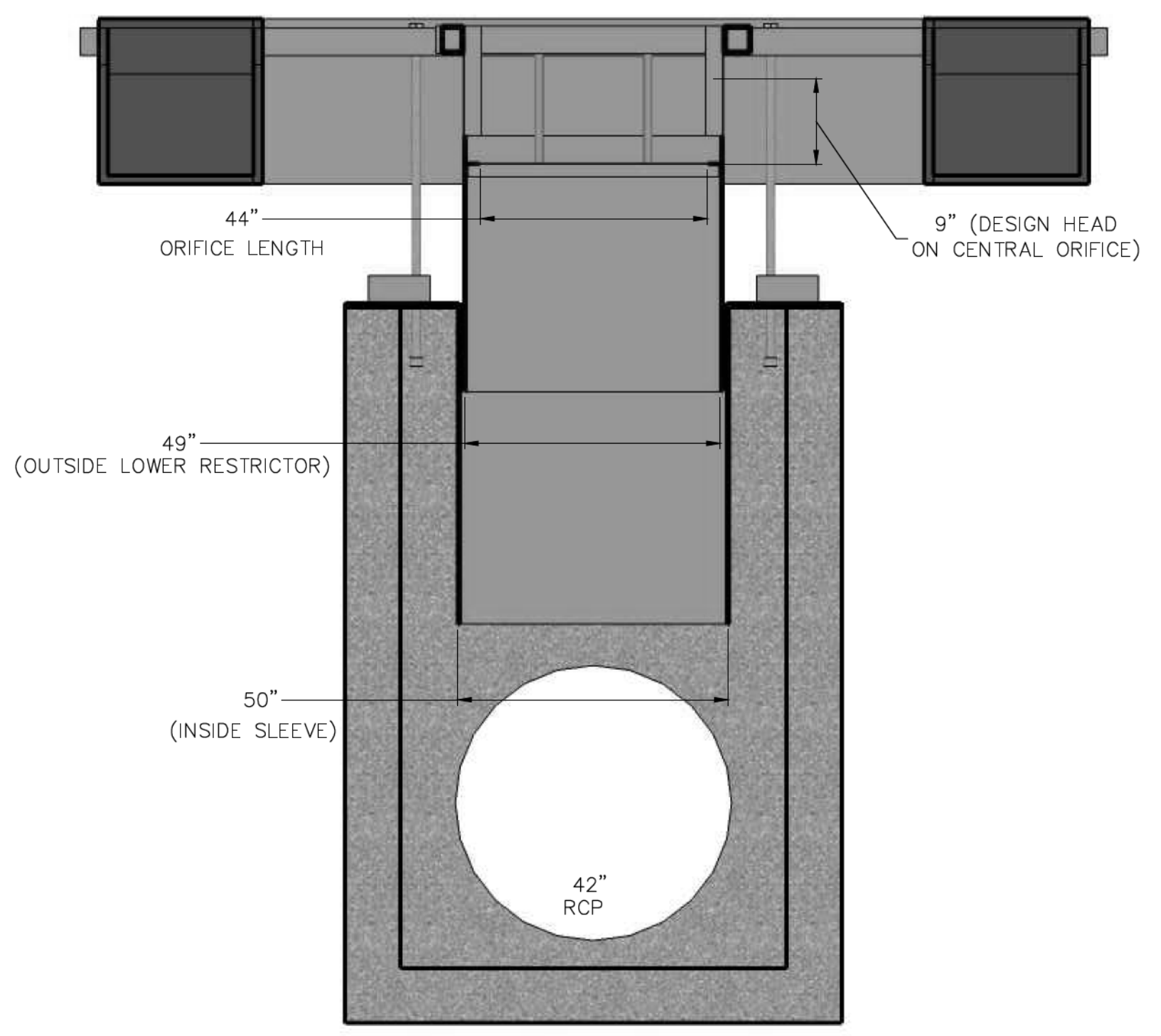
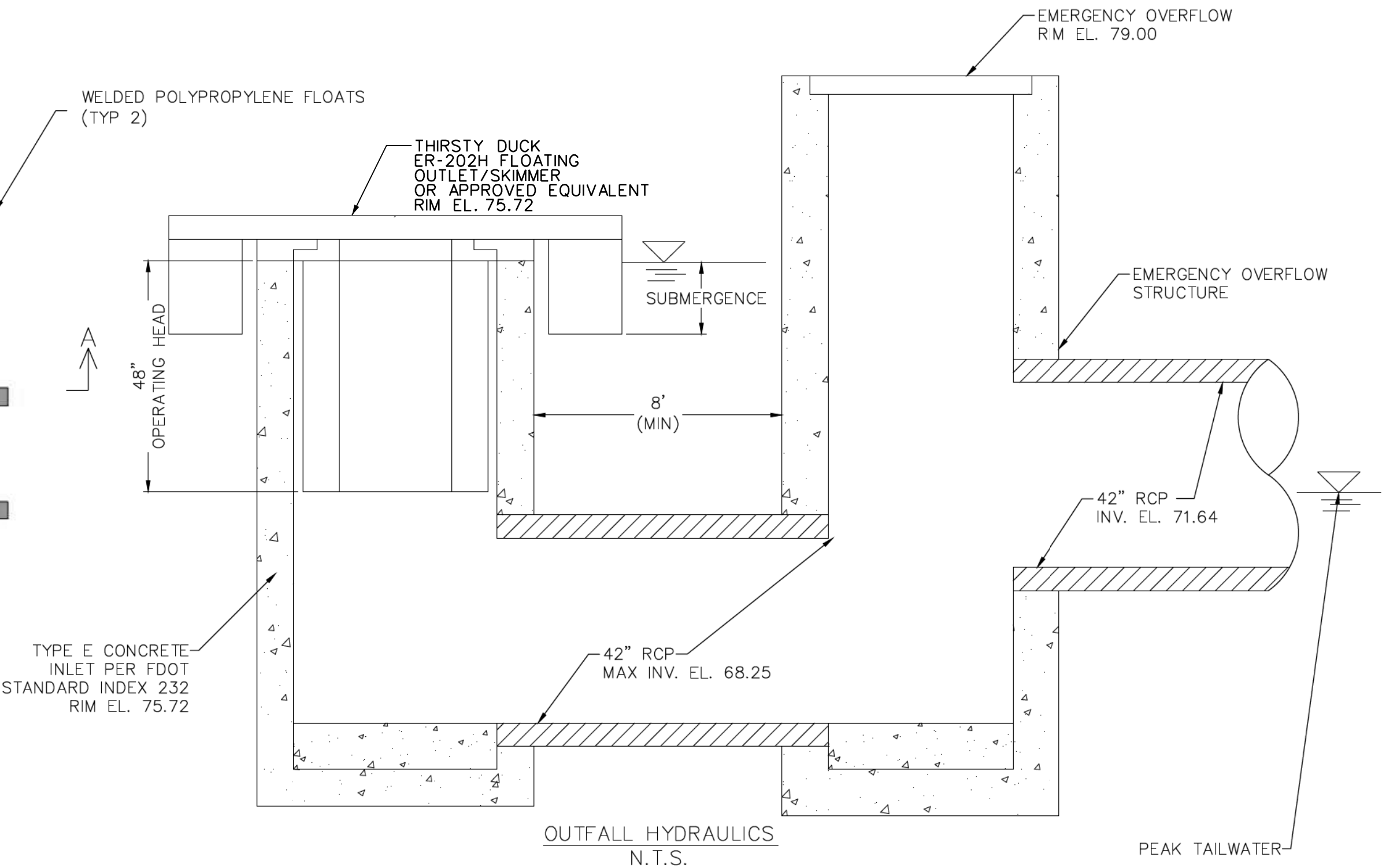
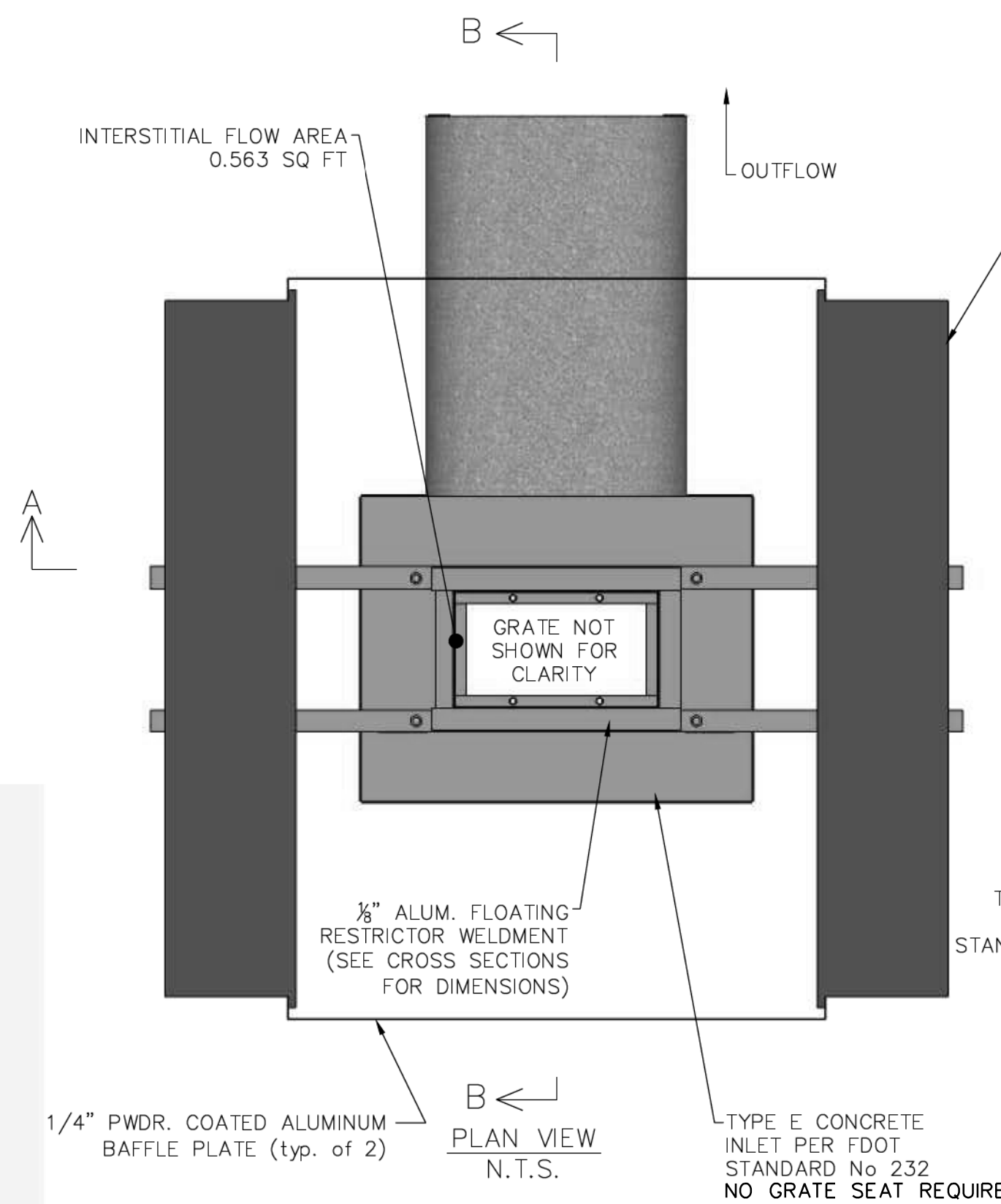


FLOATING RESTRICTOR
N.T.S.

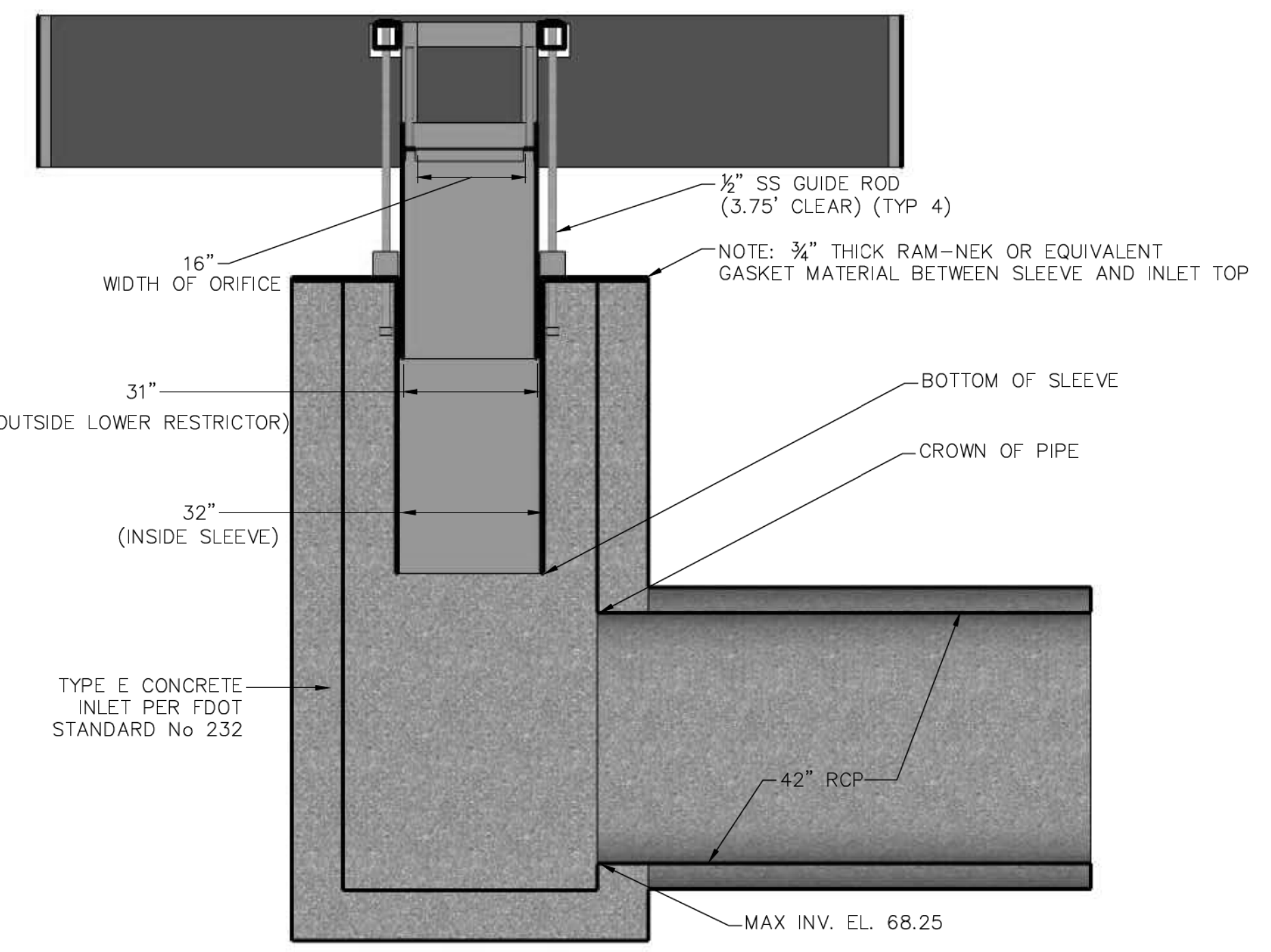


SLEEVE
N.T.S.

INTERSTITIAL FLOW AREA CALCULATION:
 INTERSTITIAL AREA = AREA OF SLEEVE OPENING - AREA OF RESTRICTOR
 AREA OF SLEEVE OPENING = LENGTH OF SLEEVE X WIDTH OF SLEEVE
 AREA OF SLEEVE OPENING = 50" X 32"
 AREA OF SLEEVE OPENING = 1600 SQ IN = 11.11 SQ FT
 AREA OF RESTRICTOR = LENGTH OF RESTRICTOR X WIDTH OF RESTRICTOR
 AREA OF RESTRICTOR = 49" X 31"
 AREA OF RESTRICTOR = 1519 SQ IN = 10.55 SQ FT
 INTERSTITIAL FLOW AREA = 0.563 SQ FT
 COEFFICIENT OF DISCHARGE: 0.80
 OPERATING HEAD = PEAK DESIGN STAGE - RIM = 79.00 - 75.80 = 3.20'
 FLOW RATE (Q) = C*A*√2g*H = 0.8*0.56*√64.4*3.20
 FLOW RATE (Q) = 6.43 CFS
 ORIFICE FLOW CALCULATION:
 ORIFICE AREA = 44" X 16" = 7.4 SQ IN = 4.89 SQ FT
 OPERATING HEAD = 9" = 0.75'
 FLOW RATE (Q) = C*A*√2g*H = 0.6*4.89*√64.4*0.75
 FLOW RATE (Q) = 20.39 CFS
 PEAK FLOW RATE = 6.43 + 20.39 = 26.82 CFS (WITH NO TAILWATER IMPACT, SEE STORMWATER DESIGN CALCULATIONS, BY OTHERS, FOR DESIGN STORM PEAK DISCHARGE RATES)



CROSS SECTION A-A
N.T.S.



CROSS SECTION B-B
N.T.S.

FLOATING OUTLET/SKIMMER DEVICE DETAIL

DETAIL PREPARED BY THIRSTY DUCK, LP. CONTRACTOR MAY USE THIRSTY DUCK ER-202H OR APPROVED EQUIVALENT

THIRSTY DUCK, LP.
 2154 DUCK SLOUGH BLVD. BLDG. 4, SUITE 103
 TRINITY, FL 34655
 TEL. (727) 376-2400 FAX (727) 376-2411
 WWW.THIRSTY-DUCK.COM

FOR: MEADOW WOODS
 THE BUOYANT FLOW DEVICE SHOWN HEREON IS COVERED UNDER U.S. PATENT NUMBER 7,762,741, 7,985,035 AND 8,043,206



DRAWN	RCB
CHECKED	RCB
DATE	02/19/2015
JOB	ER202H

SHEET
6

N:\Cadd\2015\20150219\MEADOW WOODS\DWG\ER202H.DWG