

Construction Documents

Thorncreek Hole No. 12 Re-Design

Project # 185-23

Sheet Index

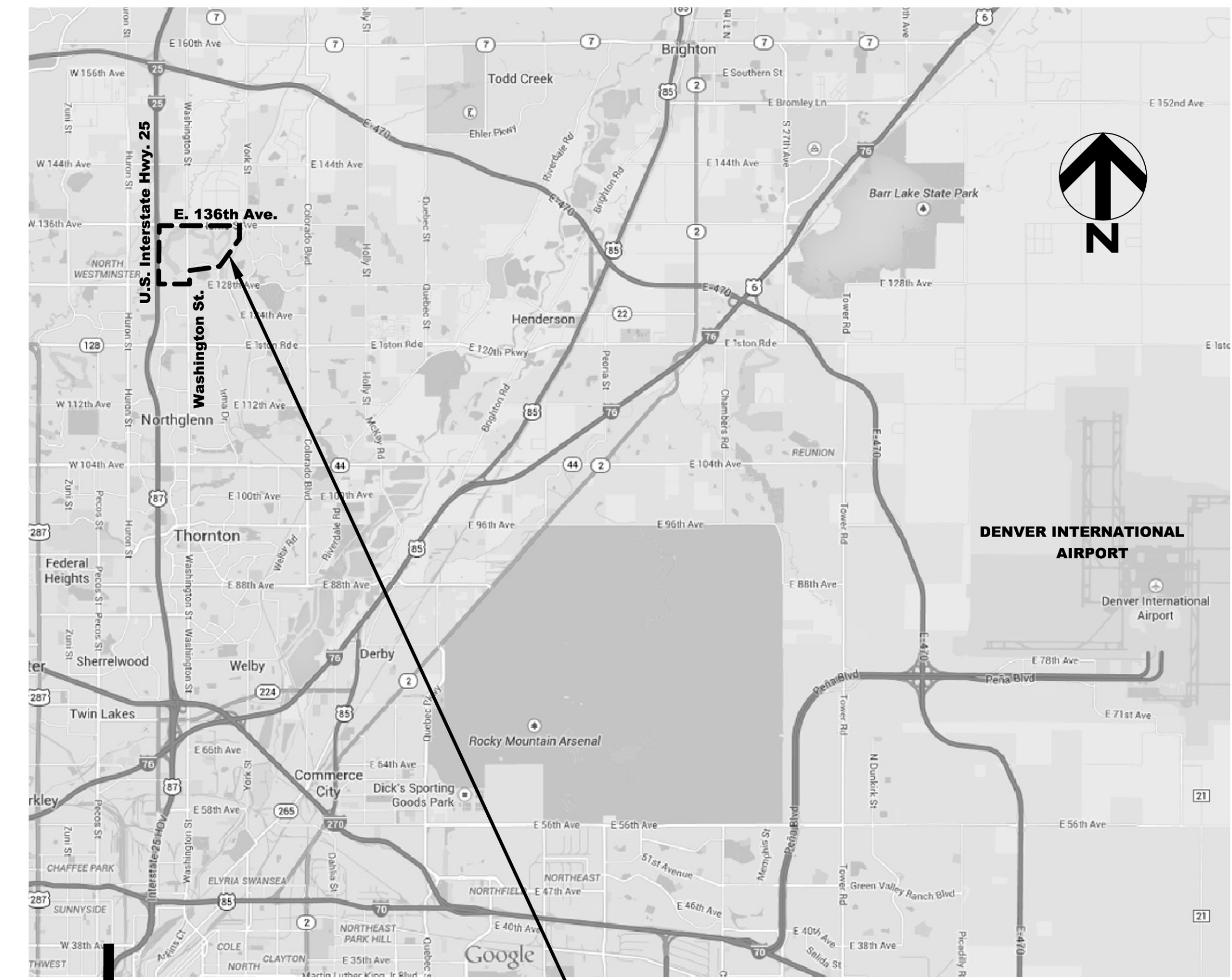
- GR 1 - Demo, Grading and Drainage Plan - Hole 12
- GR 2 - Cut/Fill Depths - Hole 12
- GS 1 - Grassing Plan - Hole 12
- DE 1 - Drainage Details
- DE 2 - Cart Path Details
- IRR 1 - Irrigation Design - Mechanical
- IRR 2 - Irrigation Design - Installation Details

Design Team

Project Lead	Irrigation Designer
Golf Course Architect	Irrigation Technologies
Finger Dye Spann, Inc.	10395 W. Ottawa Ave.
5339 Garnetfield Lane	Littleton, CO 80127
Katy, TX 77494	(720) 240 - 6208
(713) 806 - 7726	Brian Keighin
Baxter Spann	Brian@Irrigation
rbs@fdsgolf.com	Technologies.biz



Location Map



Thorncreek Golf Course
 13555 N. Washington St.
 Thornton, CO 80241
 (303) 450-7055

PREPARED FOR: CITY OF THORNTON, COLORADO
PREPARED BY: FINGER DYE SPANN, INC.

 SIGNATURE
 PROJECT MANAGER - CITY OF THORNTON

 SIGNATURE
 CAPITAL PROJECTS PLANNING MANAGER - CITY OF THORNTON



**Know what's below.
 Call before you dig.**

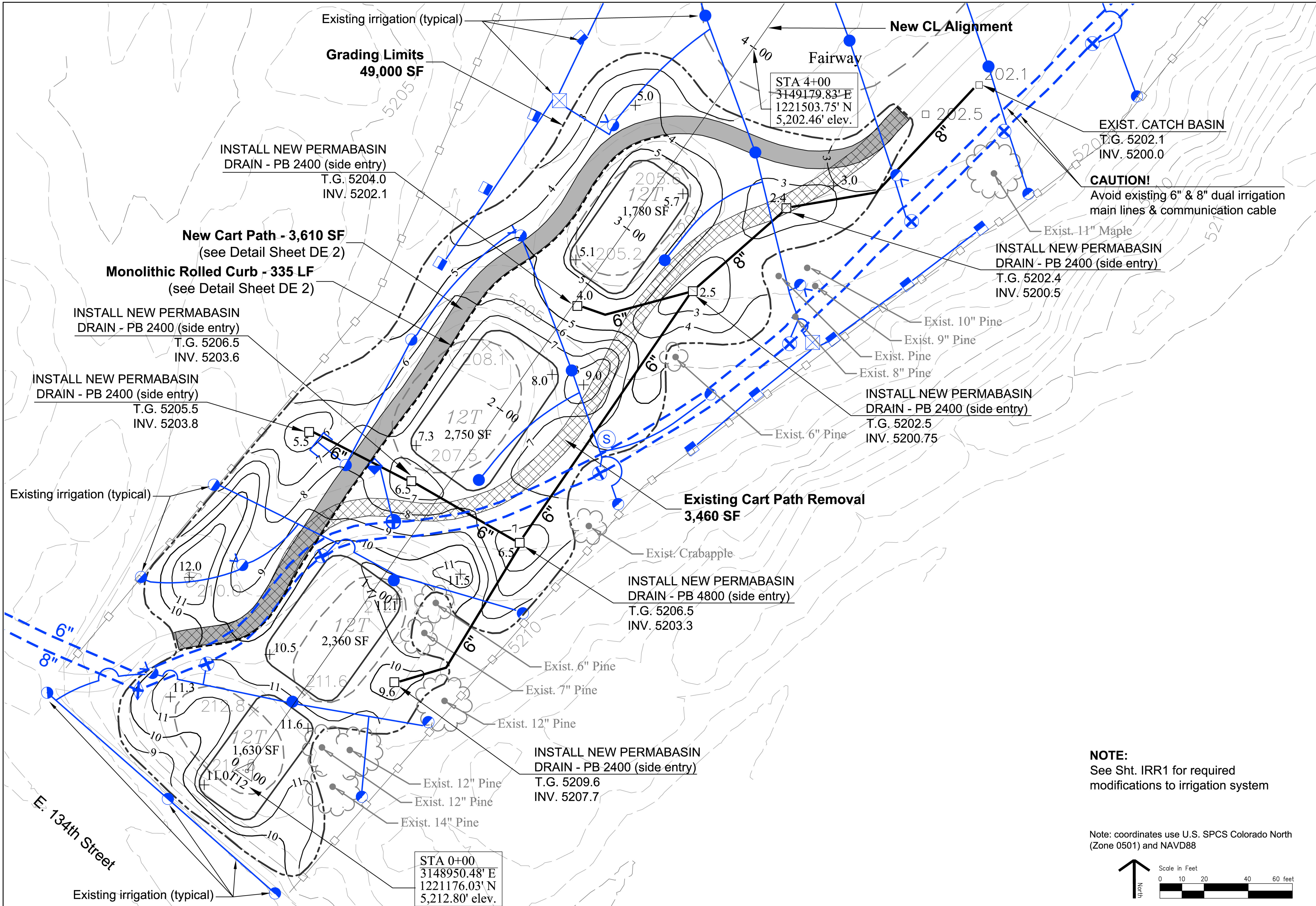
Finger Dye Spann, Inc.
Golf Course Architects
 5339 Garnetfield Lane
 Katy, Texas 77494-6559
 fdsi@fdsgolf.com

Sheet Title: **COVER SHEET**

Project: **Thorncreek Golf Course Thornton, Colorado**

Project Architect:	RBS
Drawn:	MAM
Checked:	RBS
Date:	11/12/23
Scale:	N / A
Revisions:	
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Sheet No. **COVER**



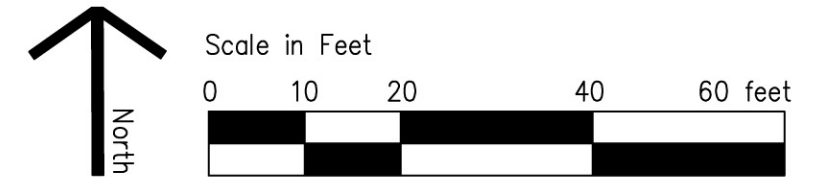
Finger Dye Spann, Inc.
 Golf Course Architects
 5339 Garnetfield Lane
 Katy, Texas 77494-6559
 fds@fdsgolf.com

Sheet Title: **DEMO, GRADING, & DRAINAGE PLAN - HOLE 12**
 Project: **Thorncreek Golf Course Thornton, Colorado**

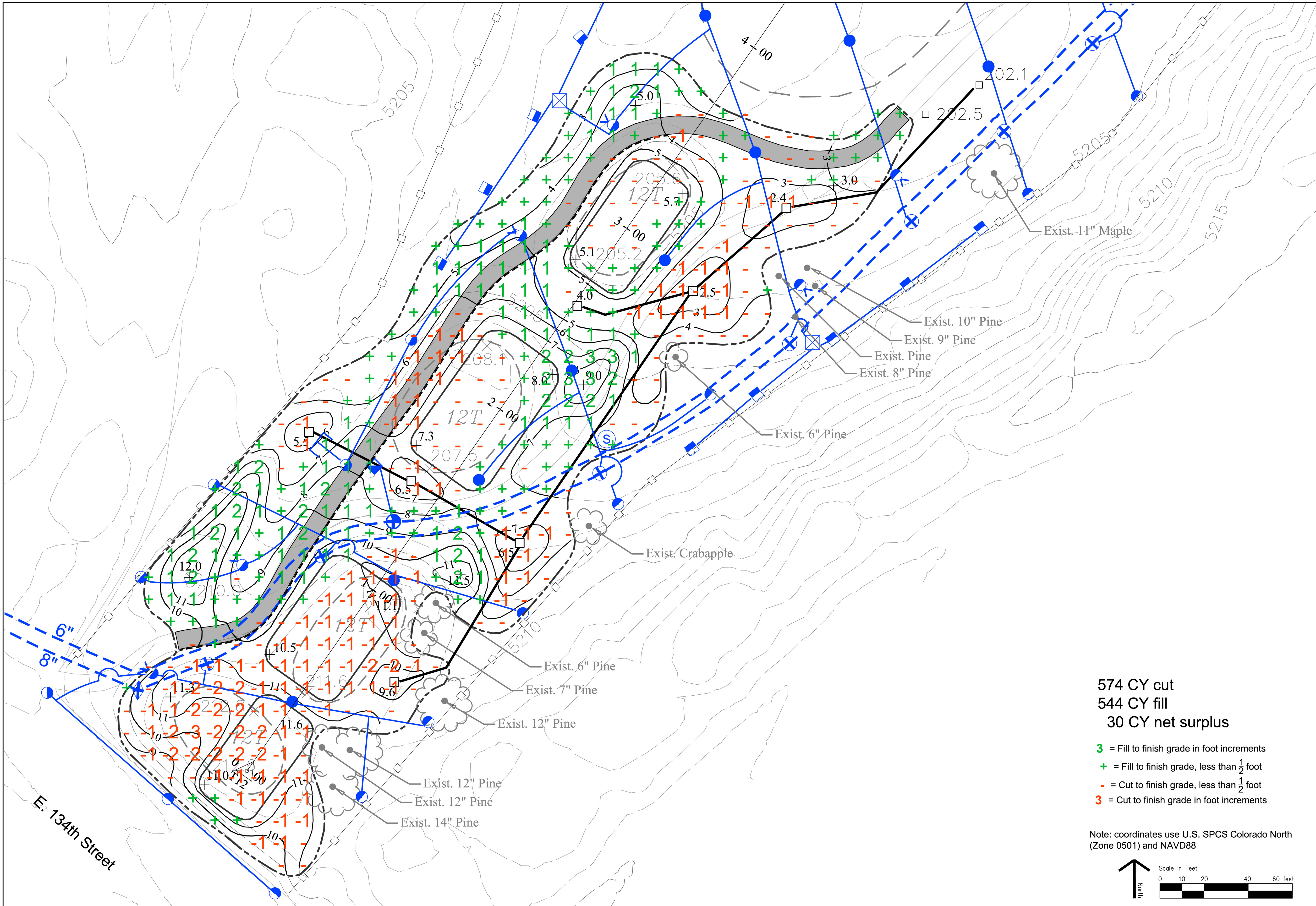
Project Architect: **RBS**
 Drawn: **MAM**
 Checked: **RBS**
 Date: **11/12/23**
 Scale: **1" = 20'**
 Revisions:

NOTE:
 See Sht. IRR1 for required modifications to irrigation system

Note: coordinates use U.S. SPCS Colorado North (Zone 0501) and NAVD88



Sheet No. **GR 1**

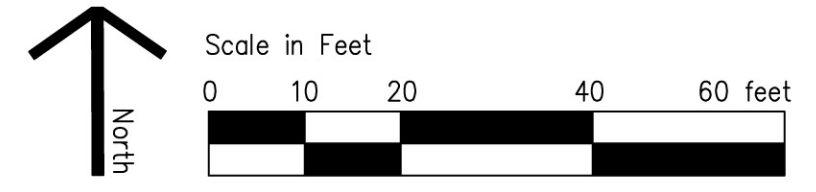


Project Architect:	RBS
Drawn:	MAM
Checked:	RBS
Date:	11/12/23
Scale:	1" = 20'
Revisions:	

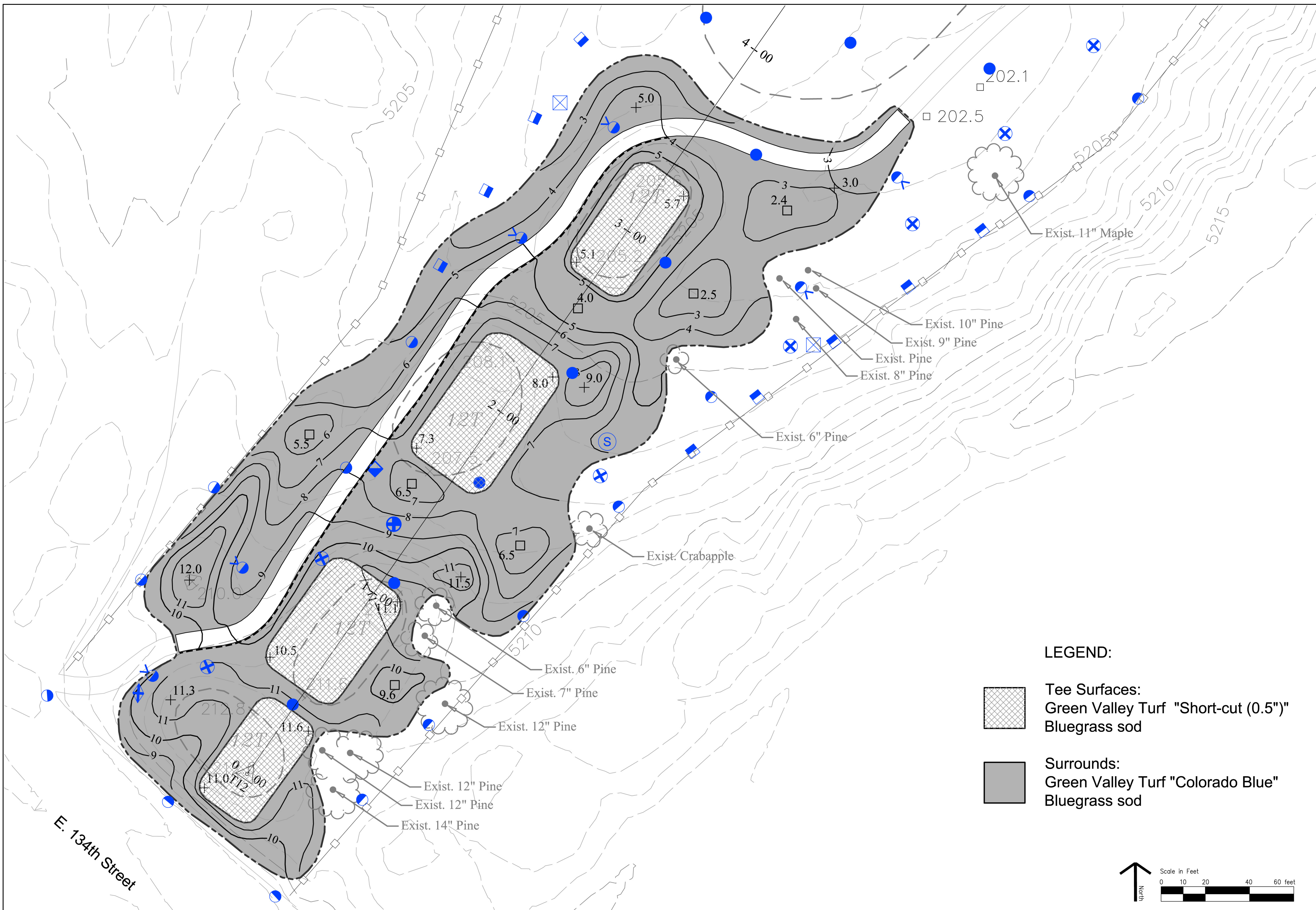
574 CY cut
544 CY fill
30 CY net surplus

- 3** = Fill to finish grade in foot increments
- +** = Fill to finish grade, less than 1/2 foot
- = Cut to finish grade, less than 1/2 foot
- 3** = Cut to finish grade in foot increments

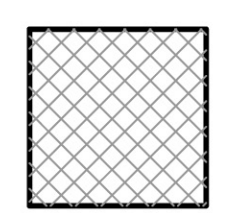
Note: coordinates use U.S. SPCS Colorado North (Zone 0501) and NAVD88



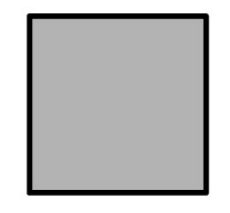
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Drawn:	MAM
Checked:	RBS
Date:	11/12/23
Scale:	1" = 20'
Revisions:	



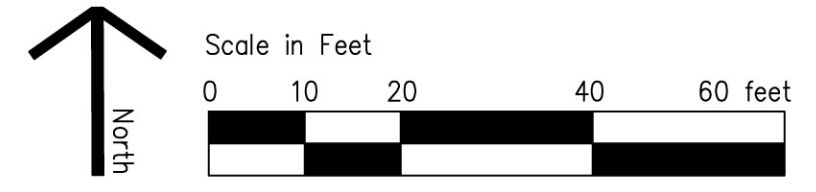
LEGEND:



Tee Surfaces:
 Green Valley Turf "Short-cut (0.5)"
 Bluegrass sod



Surrounds:
 Green Valley Turf "Colorado Blue"
 Bluegrass sod



E. 134th Street

TURF DRAINAGE CO. OF AMERICA

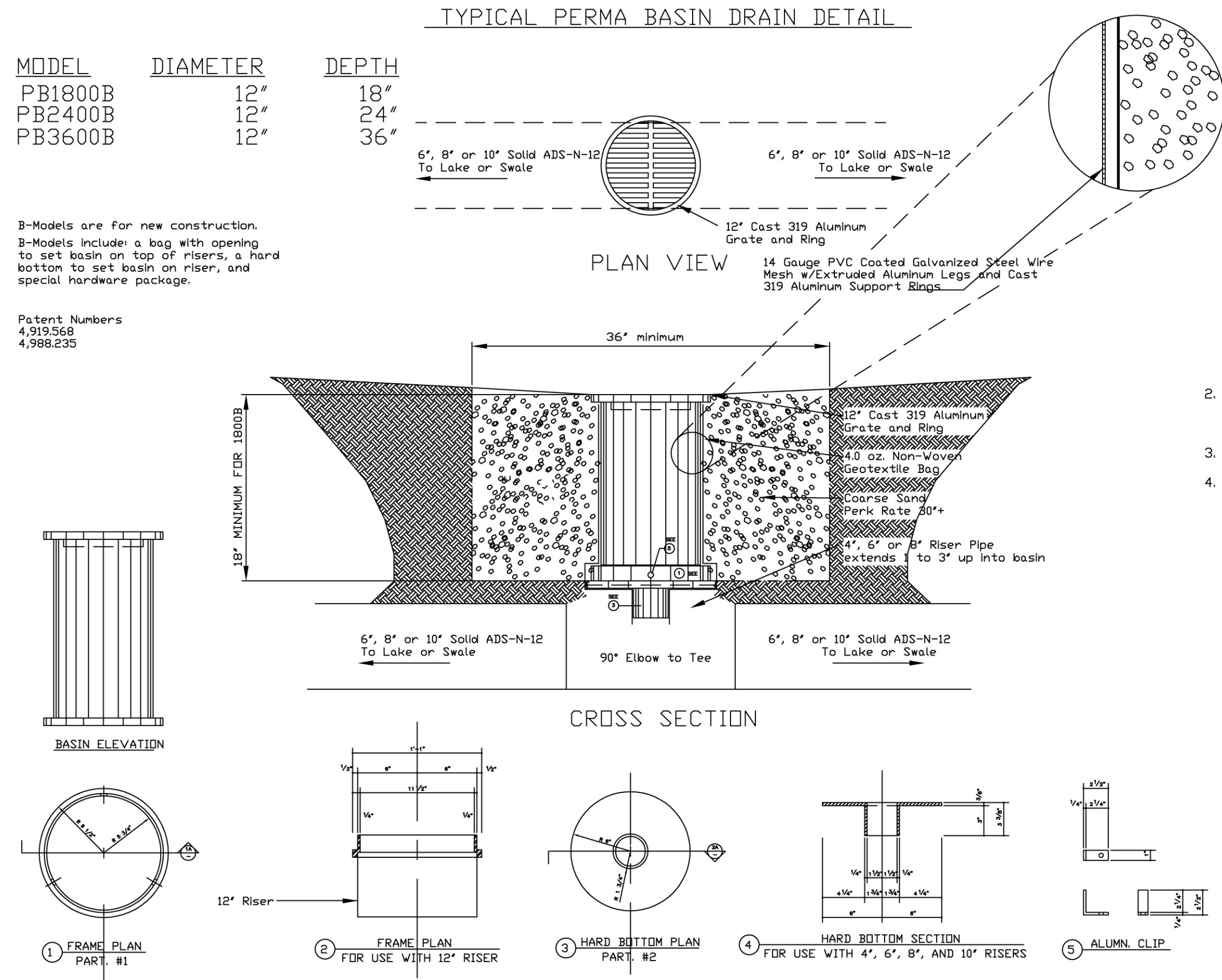
P.O. Box 702
Marrero, LA 70072
1-800-999-2794
Florida: 813-681-9204

MODEL	DIAMETER	DEPTH
PB1800B	12"	18"
PB2400B	12"	24"
PB3600B	12"	36"

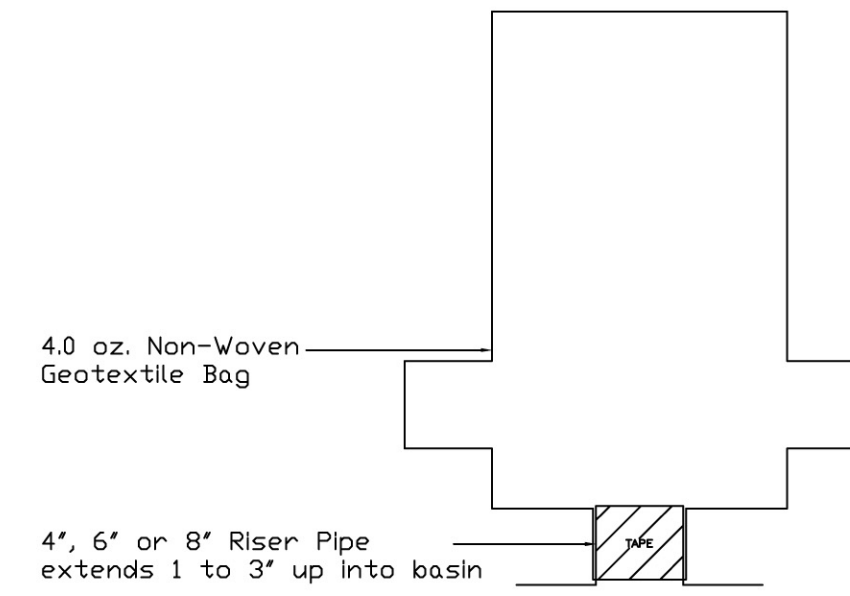
B-Models are for new construction.
B-Models include a bag with opening to set basin on top of risers, a hard bottom to set basin on riser, and special hardware package.

Patent Numbers
4,919,568
4,989,235

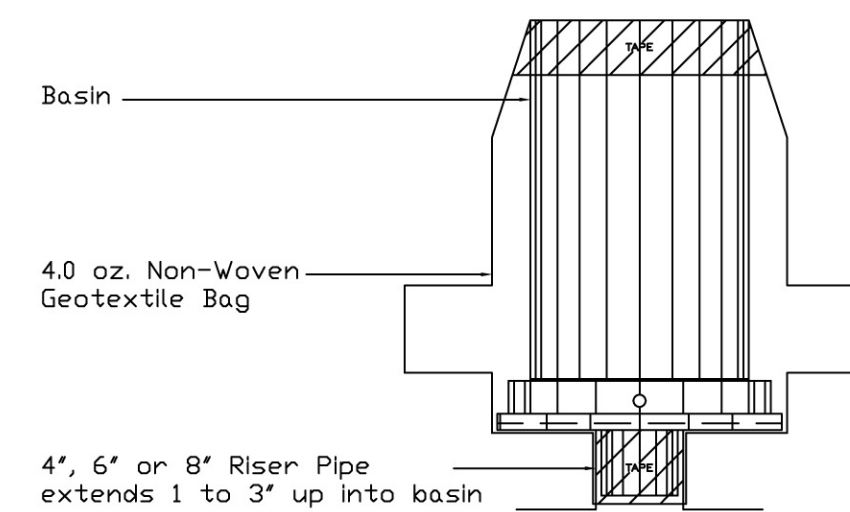
TYPICAL PERMA BASIN DRAIN DETAIL



1. Using black PVC drainage tape, secure the bottom sleeve to the outside of the riser.

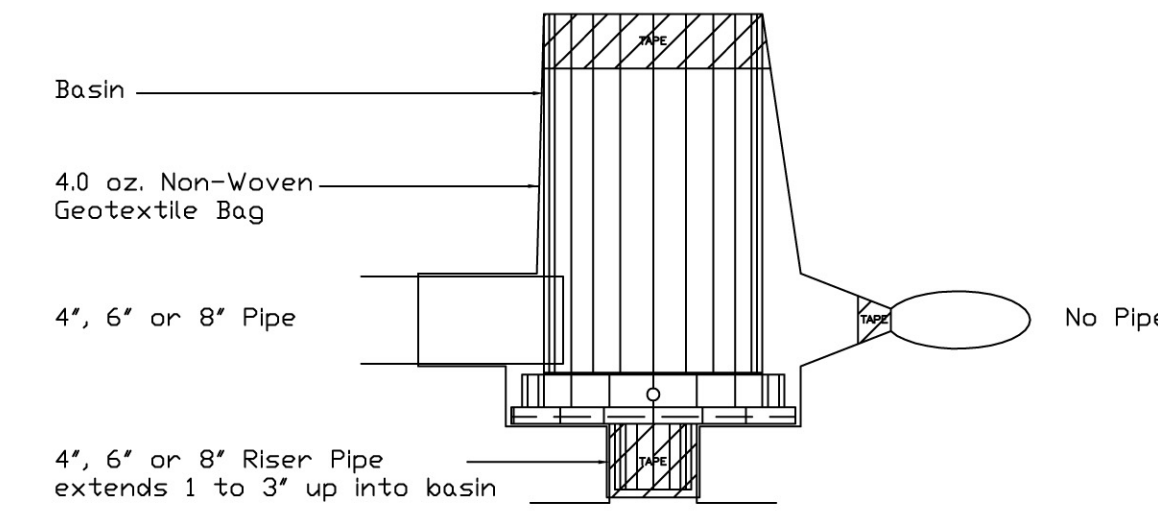


2. Insert the basin into bag so that bottom of plastic hard bottom rests on the riser, and the hard bottom insert is inside of riser pipe.
3. Use a flat head screw driver to drive geotextile bag between wire wall and upper frame.
4. Use black PVC drainage tape to cover any gaps that exist between the bag and the top frame.

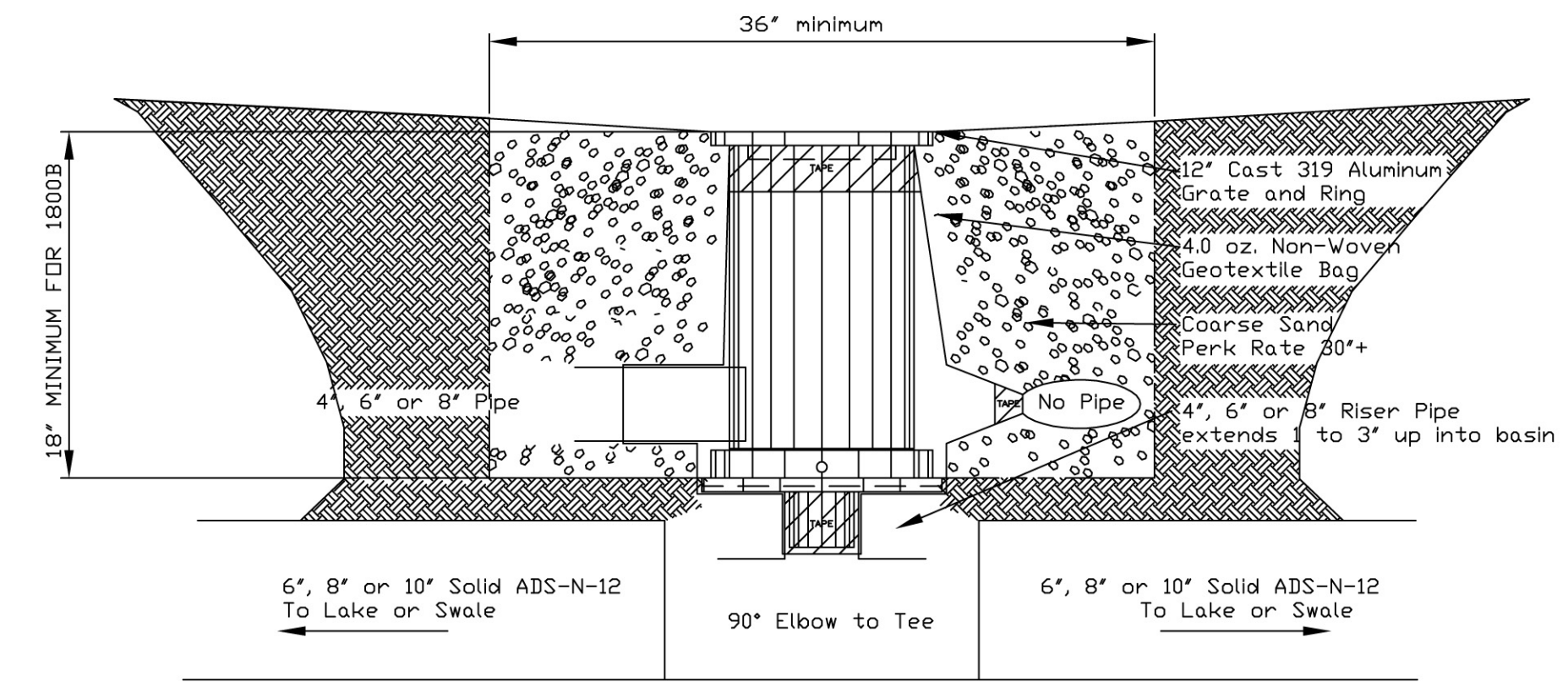


INSTALLATION STEPS

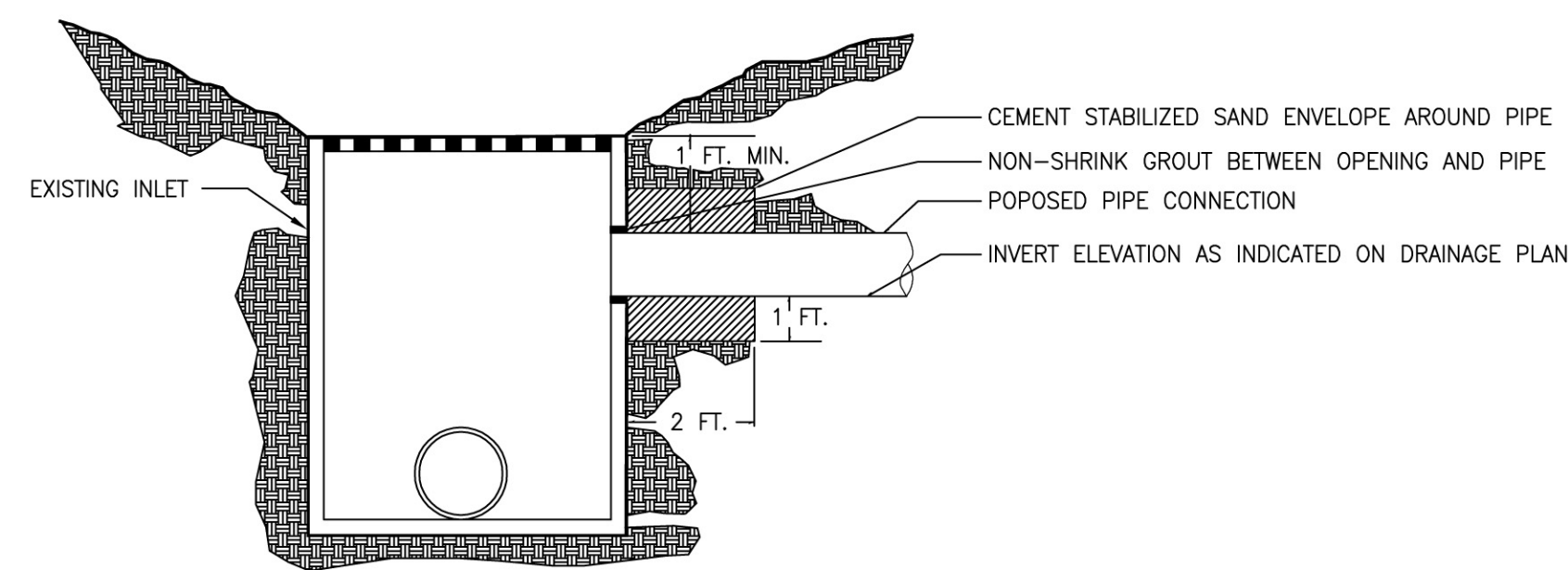
5. Any additional piping that is entering this basin should enter through the universal sleeves that are located on the sidewalls. There are two sleeves that can be used to attach 4, 6, or 8" pipe. When using these sleeves, wrap the sleeves around the pipe, and then use wire clippers to cut an opening out of the wire wall. Place the mouth of the pipe through the cylinder of the wall so that water will flow freely into the basin. Secure the sleeve around the pipes with black PVC drainage tape. If there are no pipes entering the basin at the time of installation, the universal sleeves should be wrapped with tape like a ponytail, to be available for future installations.



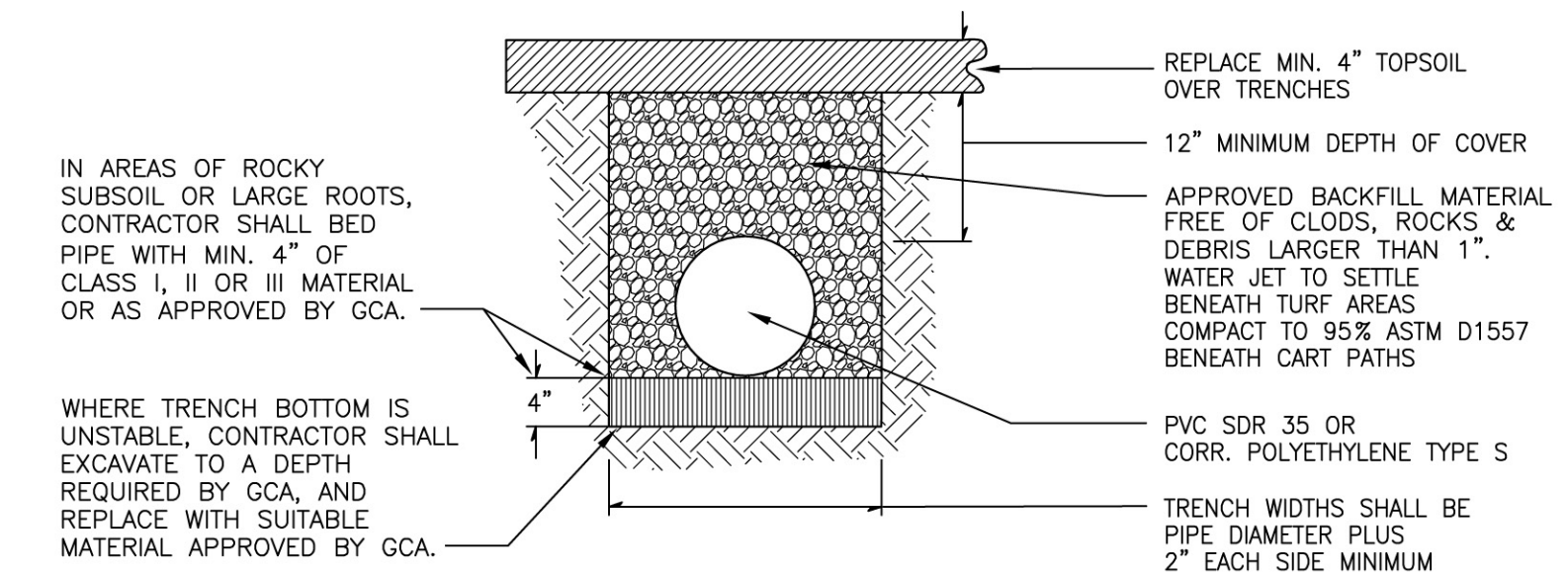
6. Sod around the basin. If sod work is not done immediately after the installation of the basin, a 15 inch square piece of a geotextile fabric should be placed on the top frame and held in place by the placement of the grate on the frame until the area is sodded and stable.



TYPICAL PERMA BASIN DRAIN (PB1800B) DETAIL & INSTALLATION INSTRUCTIONS



INLET CONNECTION DETAIL



SOLID PIPE BEDDING DETAIL

Finger Dye Spann, Inc.
Golf Course Architects
5339 Gametfield Lane
Katy, Texas 77494-6559
fds@fdsgolf.com

DRAINAGE DETAILS

Sheet Title:

Project:

Project Architect:

RBS

Drawn:

MAM

Checked:

RBS

Date:

11/12/23

Scale:

N.T.S.

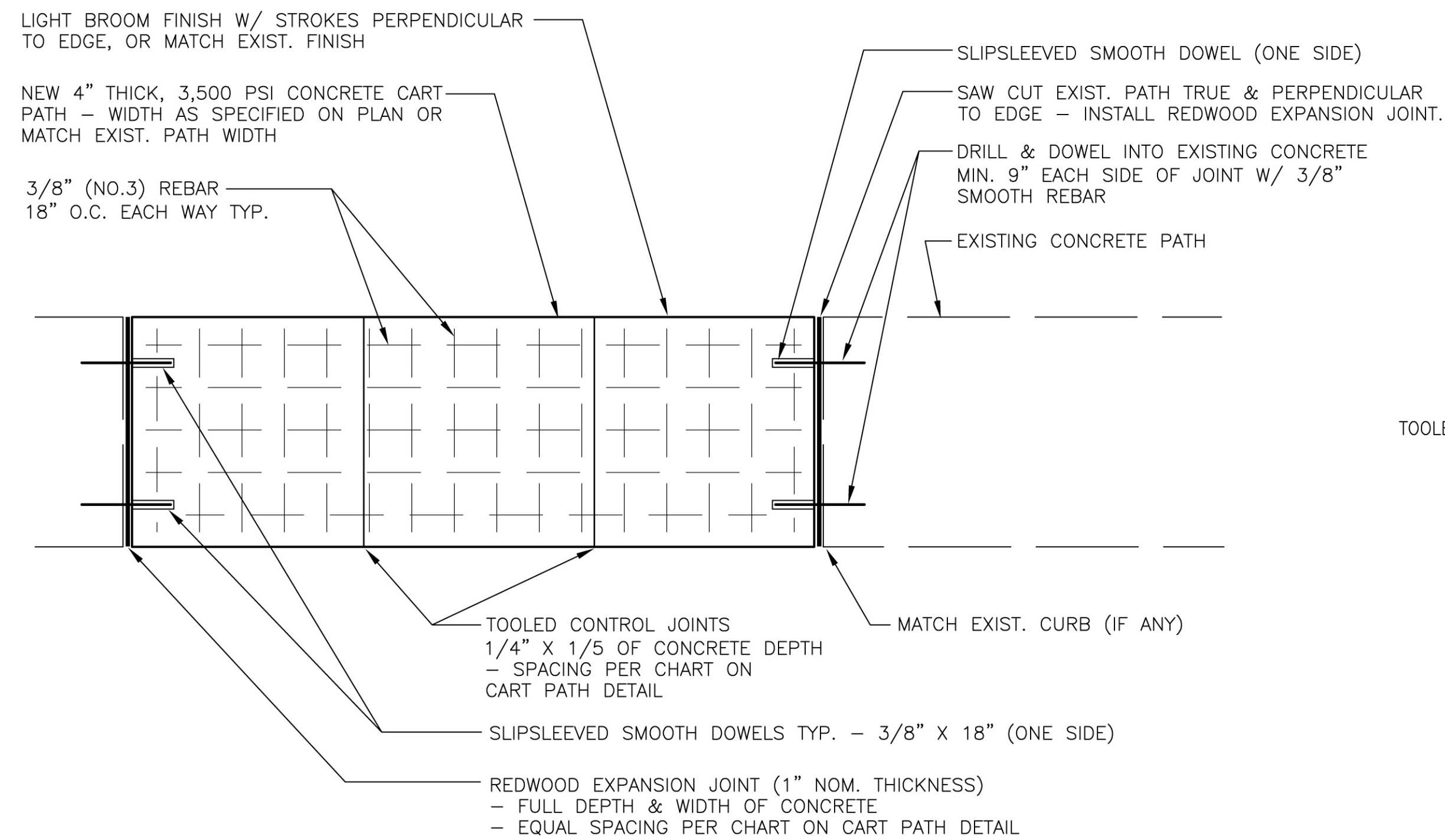
Revisions:

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Sheet No.

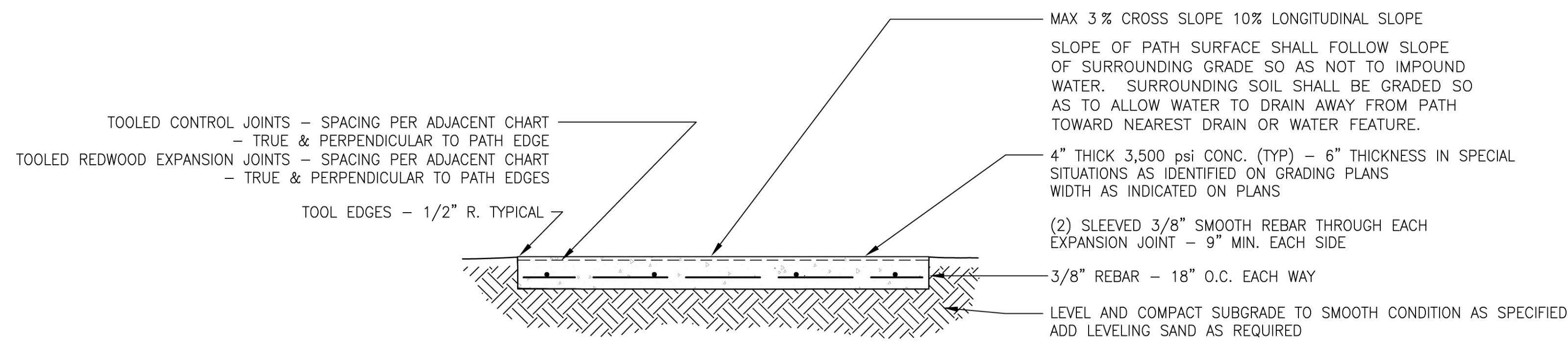
DE 1

Thornton, Colorado
Thorncreek Golf Course



CONCRETE CART PATH -TIE INTO EXISTING PATH DETAIL

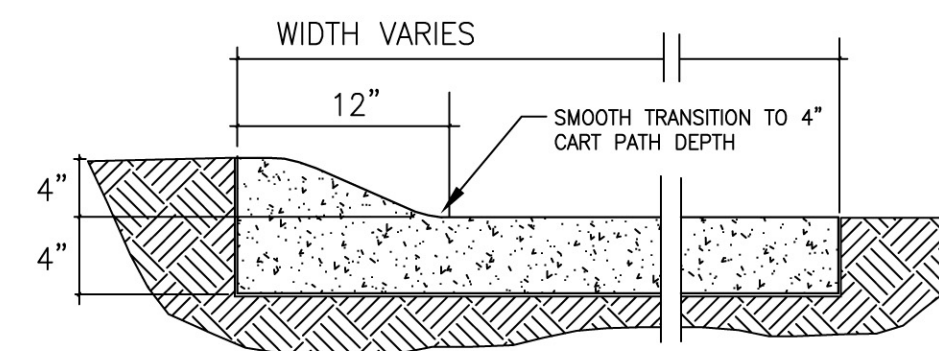
PATH WIDTH	MAXIMUM	MAXIMUM
	EXPANSION JOINT SPACING	CONTROL JOINT SPACING
6 FT.	18 FT.	6 FT.
8 FT.	24 FT.	8 FT.
10 FT. OR WIDER	30 FT.	10 FT.



CONCRETE CART PATH DETAIL

NOTES:

1. ROLLED CURB IS FORMED AND Poured WITHIN THE CART PATH WIDTH ON NEW PATH SECTIONS.
2. INSTALL ONLY IN LOCATIONS SPECIFICALLY CALLED OUT ON PLAN - NORMAL CURBING TO MATCH EXISTING. SEE ADJACENT DETAIL



ROLLED CURB DETAIL

CART PATH DETAILS

Thorncreek Golf Course Thornton, Colorado

Sheet Title:

Project:

Project Architect:

RBS

Drawn:

MAM

Checked:

RBS

Date:

11/12/23

Scale:

N.T.S.

Revisions:

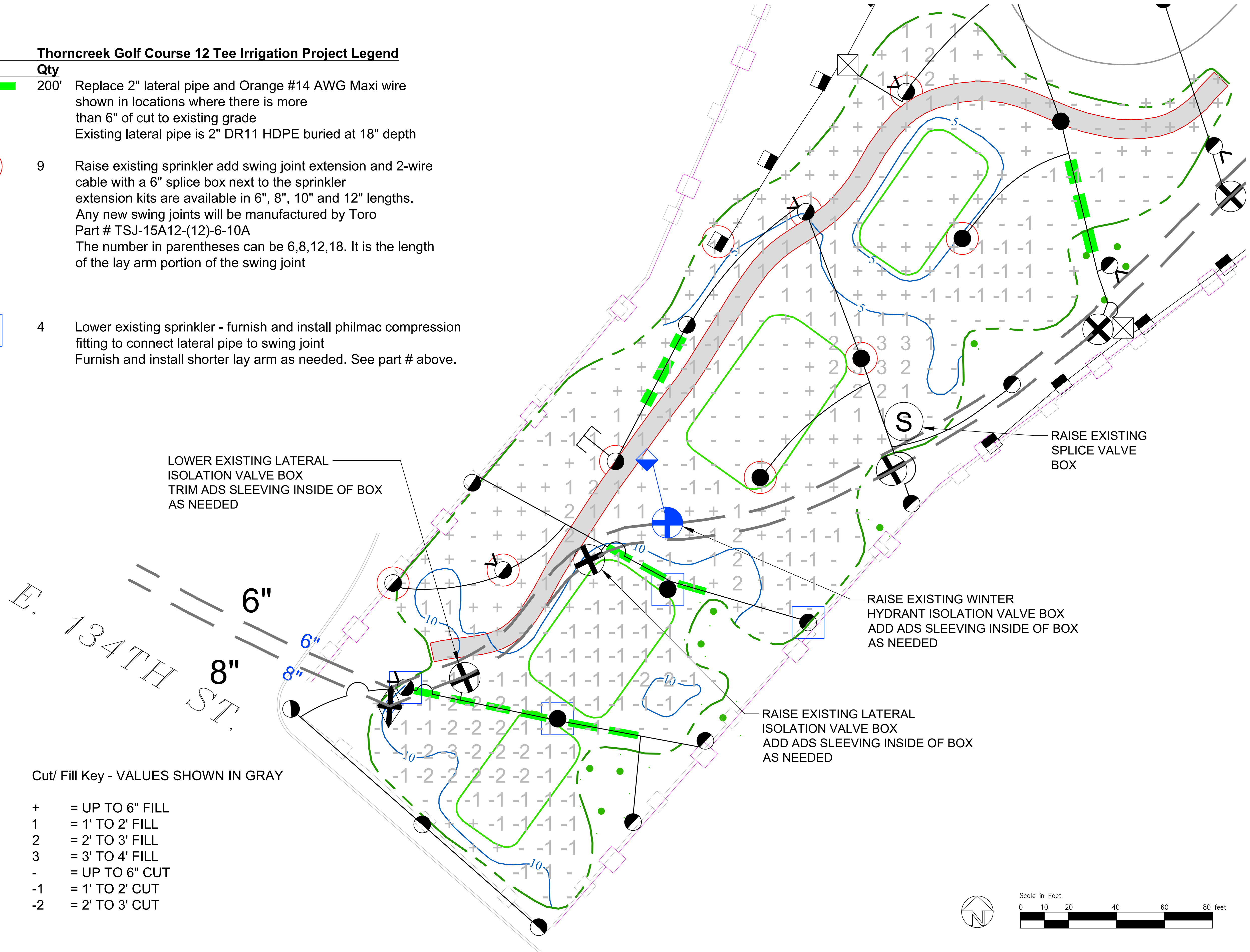
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Sheet No.

DE 2

Thorncreek Golf Course 12 Tee Irrigation Project Legend

- | | |
|-------------------------------|---|
| <p>200'</p> <p>9</p> <p>4</p> | <p>Replace 2" lateral pipe and Orange #14 AWG Maxi wire shown in locations where there is more than 6" of cut to existing grade
Existing lateral pipe is 2" DR11 HDPE buried at 18" depth</p> <p>Raise existing sprinkler add swing joint extension and 2-wire cable with a 6" splice box next to the sprinkler extension kits are available in 6", 8", 10" and 12" lengths. Any new swing joints will be manufactured by Toro Part # TSJ-15A12-(12)-6-10A The number in parentheses can be 6,8,12,18. It is the length of the lay arm portion of the swing joint</p> <p>Lower existing sprinkler - furnish and install philmac compression fitting to connect lateral pipe to swing joint
Furnish and install shorter lay arm as needed. See part # above.</p> |
|-------------------------------|---|



LOWER EXISTING LATERAL ISOLATION VALVE BOX TRIM ADS SLEEVING INSIDE OF BOX AS NEEDED

RAISE EXISTING SPLICE VALVE BOX

RAISE EXISTING WINTER HYDRANT ISOLATION VALVE BOX ADD ADS SLEEVING INSIDE OF BOX AS NEEDED

RAISE EXISTING LATERAL ISOLATION VALVE BOX ADD ADS SLEEVING INSIDE OF BOX AS NEEDED

Cut/ Fill Key - VALUES SHOWN IN GRAY

- + = UP TO 6" FILL
- 1 = 1' TO 2' FILL
- 2 = 2' TO 3' FILL
- 3 = 3' TO 4' FILL
- = UP TO 6" CUT
- 1 = 1' TO 2' CUT
- 2 = 2' TO 3' CUT



IRRIGATION DESIGN - 12 TEE RENOVATION
MECHANICAL

Construction Documents
Thorncreek Golf Course Improvements
Thornton, Colorado

Sheet Title:

Project:

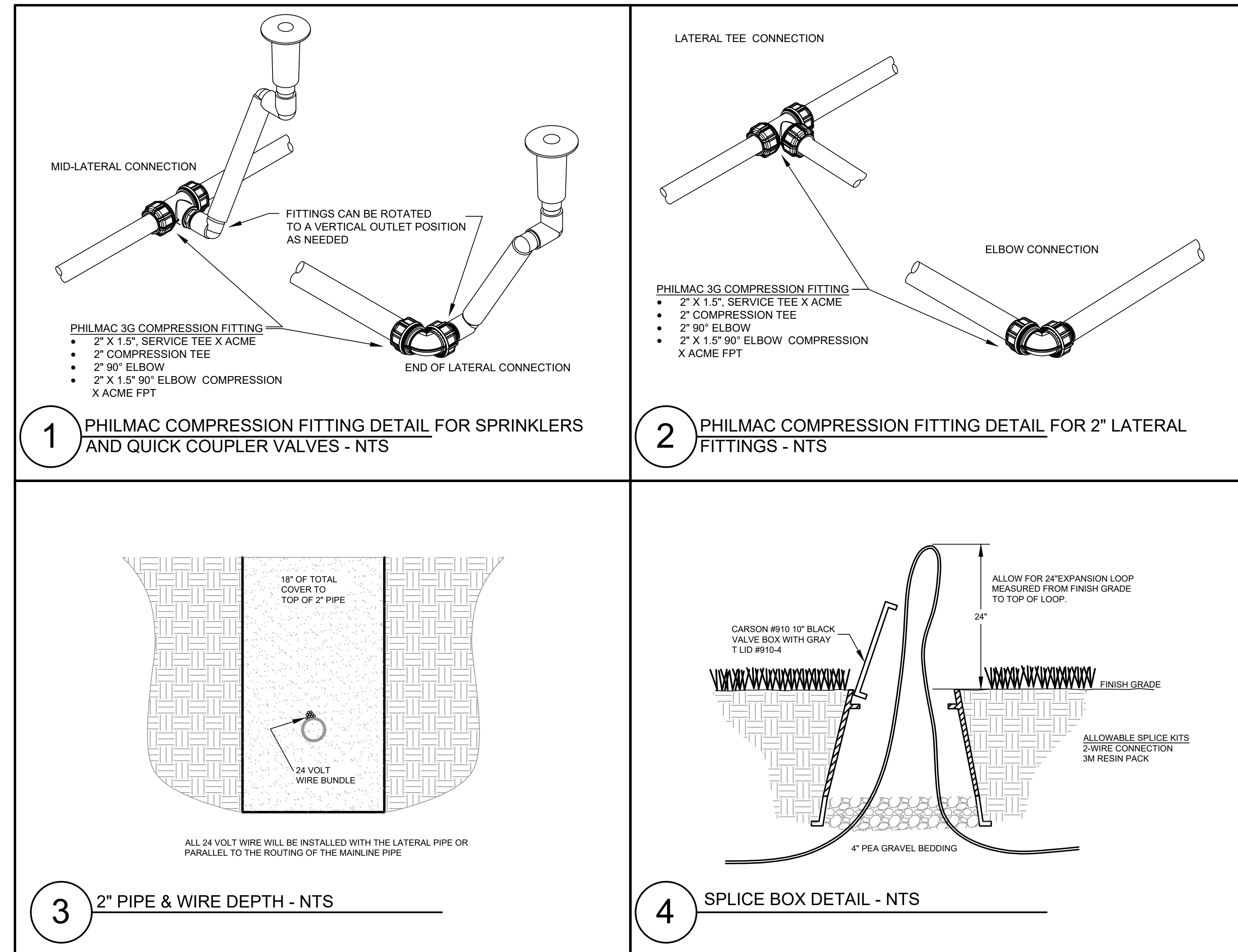
Project Architect:	BDK
Drawn:	BDK
Checked:	BDK
Date:	11/09/2023
Scale:	1" = 20'
Revisions:	
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	<input type="checkbox"/>

Architect's Seal:

Sheet No.
IRR 1

Irrigation Replacement General Scope of Work

1. The Contractor will supply all skilled labor and materials for the project.
2. All sprinkler equipment will be hard staked with 1" x 4' wood lath stakes marked with ribbon prior to working in the area.
3. Philmac compression coupling fittings will be used for all swing joint, pipe to pipe and end of line connections/terminations.
4. The Contractor will be trained by the Philmac supplier in the proper installation methods and techniques of the fittings. The Contractor will use only Philmac approved tools in the installation process of the fittings.
5. The irrigation designer will stake all the sprinklers shown on the plan and will provide one (1) set of hard copies along with an electronic pdf plan set. Prior to final payment, the Contractor will provide to the Irrigation Designer legible field notes that identify any pipe or wire changes that occurred during installation.
6. The Contractor will install new #14 awg maxi wire wire to all areas that have new 2" lateral pipe installed. Match existing orange wire color.
7. All splices will be completed using new 3M 3570G-N resin packs, following manufacturers recommended procedures.
8. All new 2-wire cable will be installed parallel to the 2" lateral pipe.
9. All new 2" lateral piping will be installed to a depth of 18". All plow lines will be properly compacted to match undisturbed soil.
10. All 2 wire splices will be accessible via valve box. See details.
11. All 2" pipe will be straightened with line tamer equipment before installation.
12. Before submitting a bid, bidder shall visit the site and shall verify the existing conditions. Contractor should prepare and allow for the repair, removal, capping and any required onsite disposal of existing usable or unusable irrigation or drainage materials that are compromised during the contractors duties and/or scope of services. All existing and working systems will be repaired to industry standards with materials supplied by the owner. All tools of the trade such as tape, shovels, wrenches, etc are to be provided by the contractor. Any old or unusable systems will be cut, removed and disposed of according to Colorado Law in owner supplied "trash bins". Any capping and or cutting of old systems will be done by the Contractor at no additional cost to the Owner.



Sheet Title:

Project:

Project Architect:

BDK

Drawn:

BDK

Checked:

BDK

Date:

11/09/2023

Scale:

N.T.S.

Revisions:

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Architect's Seal:

Sheet No.

IRR 2