

PROGRESS WEST HEALTHCARE CENTER

(BJC HOSPITAL) AT PROGRESS POINT

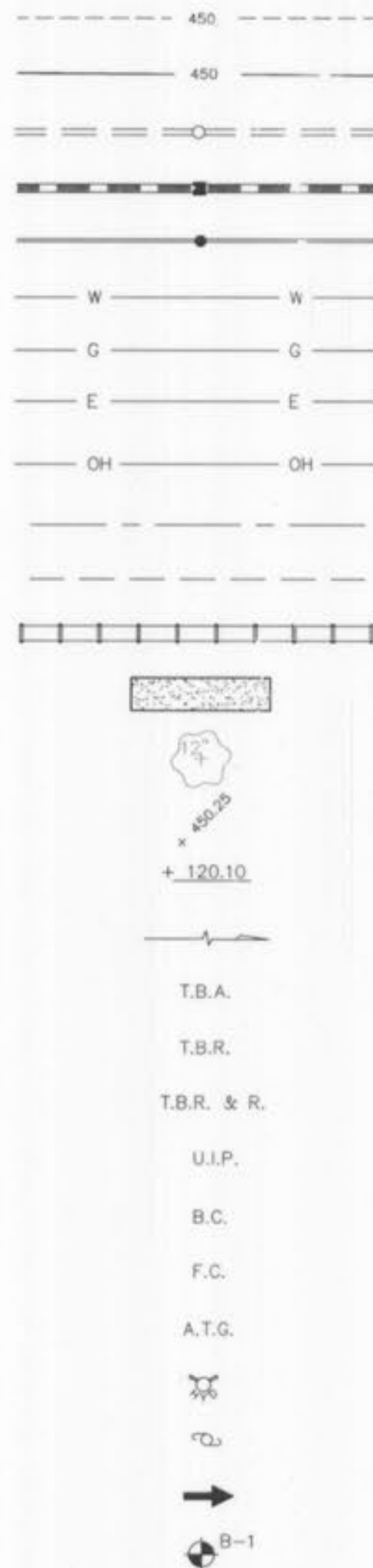
A TRACT OF LAND BEING LOT 6 OF "PROGRESS POINT VILLAGE"
AS RECORDED IN PLAT BOOK 40, PAGES 290-293
LOCATED IN U.S. SURVEYS 1669 AND 1796, TOWNSHIP 46 NORTH,
RANGE 3 EAST OF THE 5TH PRINCIPAL MERIDIAN
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

ASBUILT PLANS



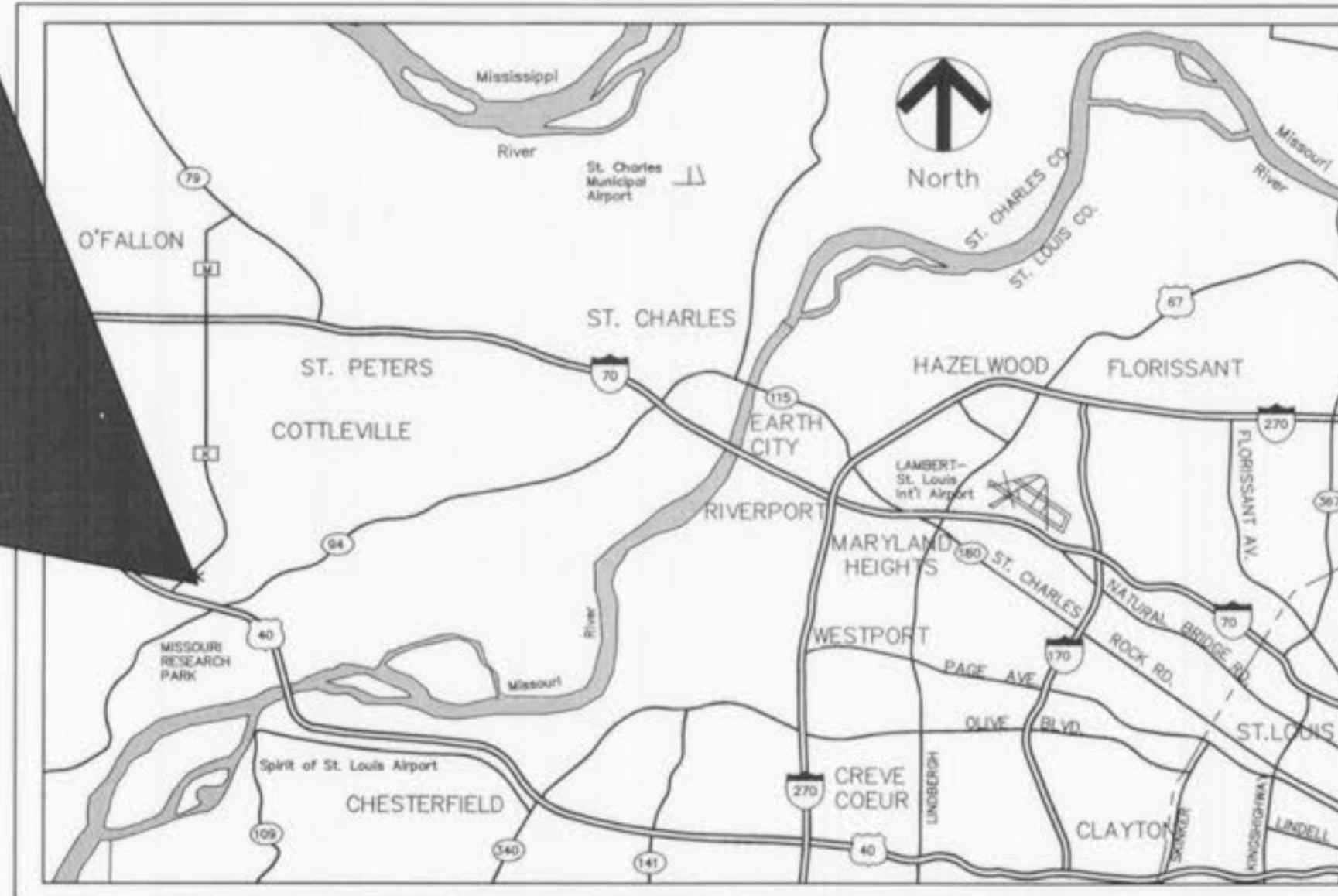
LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SEWER
- PROP. STORM SEWER
- PROP. SANITARY SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC
- OVERHEAD WIRES
- CENTERLINE
- EASEMENT
- RAILROAD
- CONCRETE PAVEMENT
- EXISTING TREES
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- SWALE
- TO BE ABANDONED
- TO BE REMOVED
- TO BE REMOVED & REPLACED
- TO BE USED IN PLACE
- BACK OF CURB
- FACE OF CURB
- ADJUST TO GRADE
- FIRE HYDRANT
- POWER POLE
- TRAFFIC FLOW
- SOIL BORINGS



BENCH MARK

BENCH MARK STATION: SC-18
ELEVATION = 611.55
DESCRIPTION: BOTH THE STATION AND THE AZMUTH MARK ARE STANDARD MO DNR ALUMINUM DISK. THE STATION IS STAMPED "SC-18, 1987". THE AZMUTH IS STAMPED "SC-12, 1987". BOTH DISK ARE SET IN 12 INCH DIAMETER BY 30 INCH DEEP CONCRETE FOUNDATION FLUSH WITH THE GROUND.
STATION AZMUTH MARKS AND REFERENCE TIES: THE STATION IS LOCATED AT THE AUGUST A. BUSH WILDLIFE AREA. IT IS IN THE GRASSY AREA WEST OF THE PAVED PARKING LOT FOR THE MAIN BUILDING OF THE BUSH WILDLIFE AREA. THE STATION IS 24 FT. SOUTH OF THE CENTER OF THE ENTRANCE ROAD, 16 FT. WEST OF THE SERVICE DRIVE TO THE BACK OF THE BUILDING.
THE AZMUTH MARK IS ABOUT 0.25 MILES WEST OF THE STATION AND NEAR THE SOUTHWEST CORNER OF THE PARKING LOT FOR THE ANDON KNIGHT HAMPTON MEMORIAL LAKE. IT IS 88.0 FT. SOUTHWEST OF THE NORTHWEST CORNER POST OF A RAIL FENCE AROUND THE PARKING LOT, 46.2 FT.



LOCATION MAP

(n.t.s.)

PERTINENT DATA

EXISTING ZONING: HTCD - HIGH TECH CORRIDOR DISTRICT
SITE ACREAGE: 47.942 ACRES ± (LOT 6)
SITE ADDRESS: #2 PROGRESS POINT PARKWAY

UTILITIES:

WATER SERVICE
MISSOURI AMERICAN WATER COMPANY
535 NORTH NEW BALLAS ROAD
ST. LOUIS, MO 63141
PH. 314-996-2286
CONTACT: MARK ARREN

SEWER DISTRICT
DUCKETT CREEK SEWER DISTRICT
3550 HIGHWAY K
O'FALLON, MO 63304-8616
PH. 636-441-1244
FAX 636-498-8150
CONTACT: MIKE O'BRIEN

PHONE SERVICE
SOUTHWESTERN BELL TELEPHONE
402 N. 3rd. STREET
ST. CHARLES, MO 63301
PH. 1-949-1320
CONTACT: DEBBIE ESTES

MoDOT REVIEW OFFICE
6780 OLD HIGHWAY "N"
402 N. 3rd. STREET
ST. CHARLES, MO 63304
PH. (314) 340-4334
CONTACT: MR. SCOTTY D. WARD

FIRE DISTRICT
COTTLEVILLE FIRE PROTECTION DIST.
P.O. BOX 385
1385 MOTHERHEAD ROAD
COTTLEVILLE, MO 63338
CONTACT: MARK BOEHLE

ELECTRIC SERVICE
AMERENUE - WENTZVILLE DISTRICT
200 CALLAHAN ROAD
WENTZVILLE, MO 63385
PH. 636-639-8307
CONTACT: SUREN MEHTA

GAS SERVICE
LACLEDE GAS
1999 TRADE CENTER EAST
ST. PETERS, MO 63376
PH. 636-978-2663 x103
CONTACT: MIKE LANGAN

UTILITY LOCATES

MISSOURI ONE-CALL
1 800 344-7483
MODOT
(314) 340-4100
CITY OF O'FALLON
(636) 281-2858

AS-BUILT

SEWER AND WATER LINE MEASUREMENTS

THE EXISTING WATER MAIN (PER STAKED OUT LOCATION), EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS SHOWN OTHERWISE.



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- 2 - 6 SITE PLAN
- 7 SANITARY PROFILES
- 8 - 12 STORM SEWER PROFILES
- 13 - 15 DETAILS
- 16 STORM SEWER HYDRAULICS

NOTE TO CONTRACTOR:
THE FOLLOWING SHEETS ARE FOR REFERENCE ONLY. IMPROVEMENTS TO PROGRESS POINT PARKWAY BYPASS LANE AND BOX CULVERT IMPROVEMENTS TO LOT 6 ARE DETAILED IN THE PLANS. CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT.

CONTRACTOR NOTE:

THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLANS). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MoDOT.

OWNER NOTE:

ONCE THE CONTRACTOR DELEVERES THE PROPERTY TO THE OWNER, THE OWNER SHALL BE RESPONSIBLE TO MAINTAIN ANY CONTROL MEASURE THAT IS TO REMAIN AS A PERMANENT STRUCTURE TO CONTROL SILTATION AND EROSION.

UTILITY NOTE:

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROCEEDINGS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

- △ 1/12/07 ASBUILT DSH
- △ 8/8/05 ASBUILT MCG
- △ REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER 6/16/05 BID PACKAGE #6
- △ 6/6/05 BUILDING PERMIT APPLICATION SET
- △ REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER

PROGRESS WEST

TITLE SHEET

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

PREPARED FOR:

BJC HealthCare

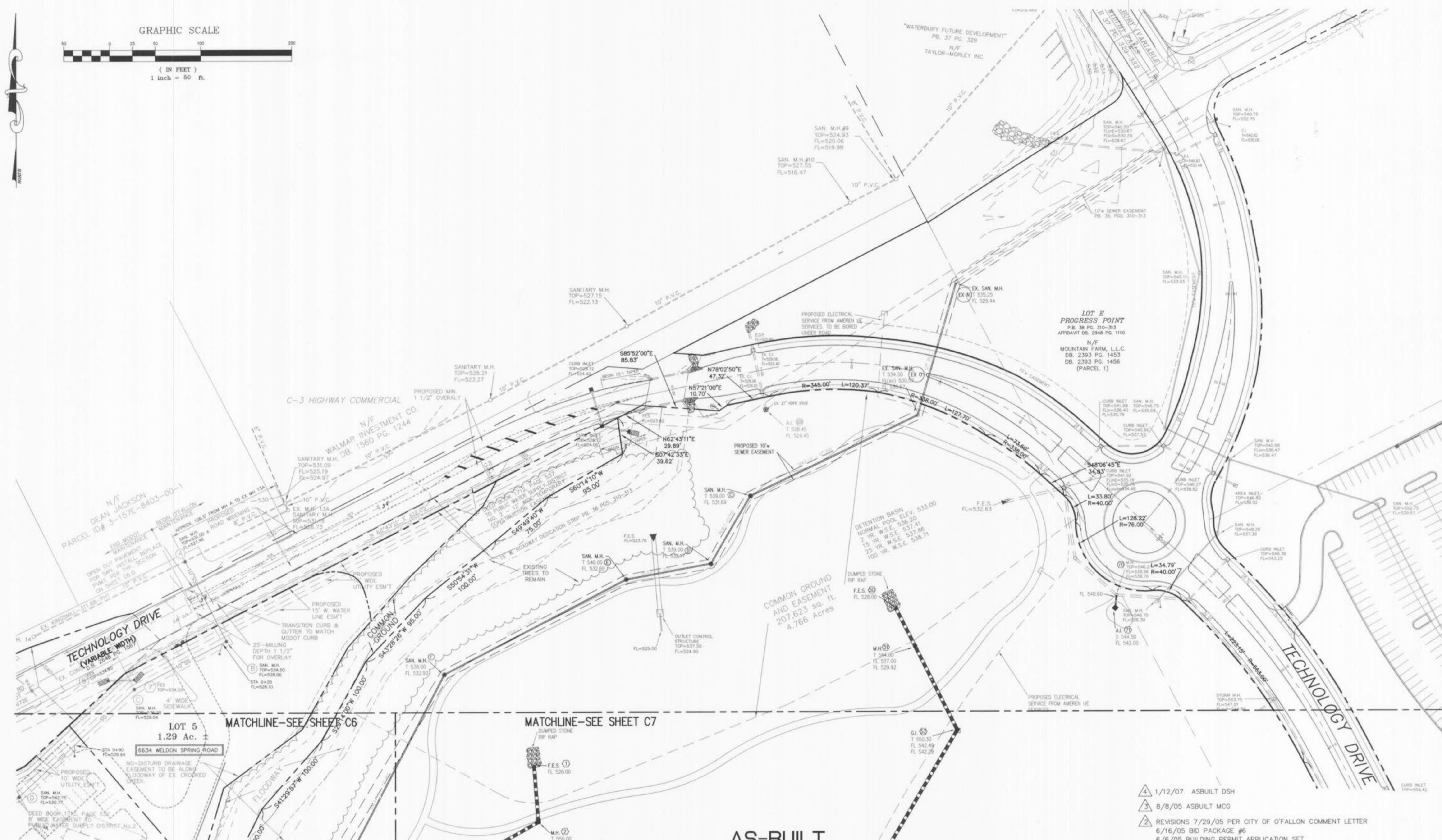
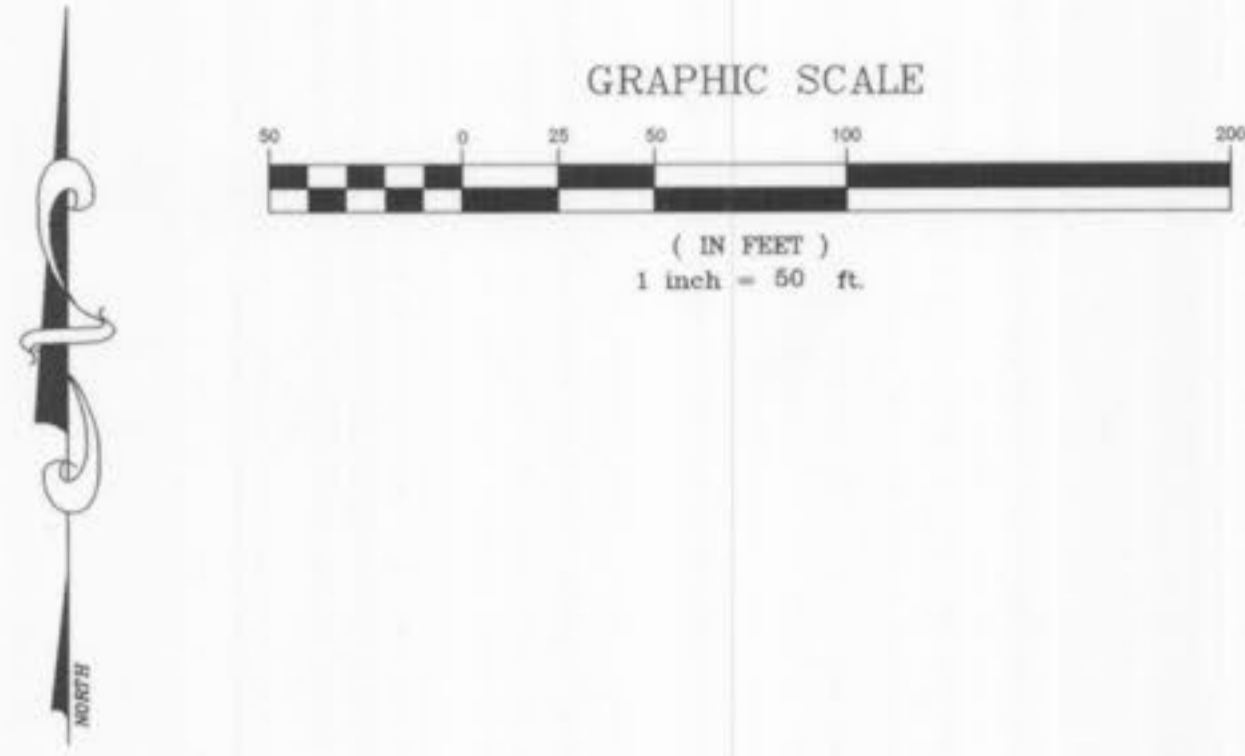
8990 Clayton Road, Suite 100
St. Louis, Missouri 63124
Phone 314.953.1933
Fax: 314.953.1950

MISSOURI DEPARTMENT OF NATURAL RESOURCES

LAND DISTURBANCE PERMIT No. - MO-R109G18

STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

GEORGE M. STOCK E-25116 J.E.F. 05.09.05 G.M.S. 05.09.05 204-3224 1 of 16



AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

THE EXISTING WATER MAIN (PER STAKED OUT LOCATION), EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

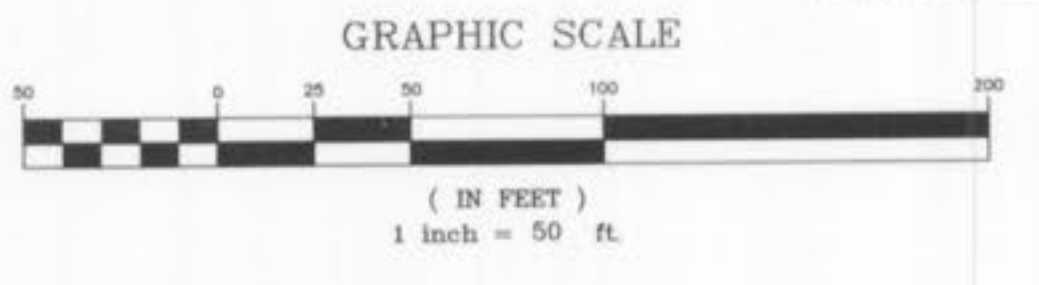
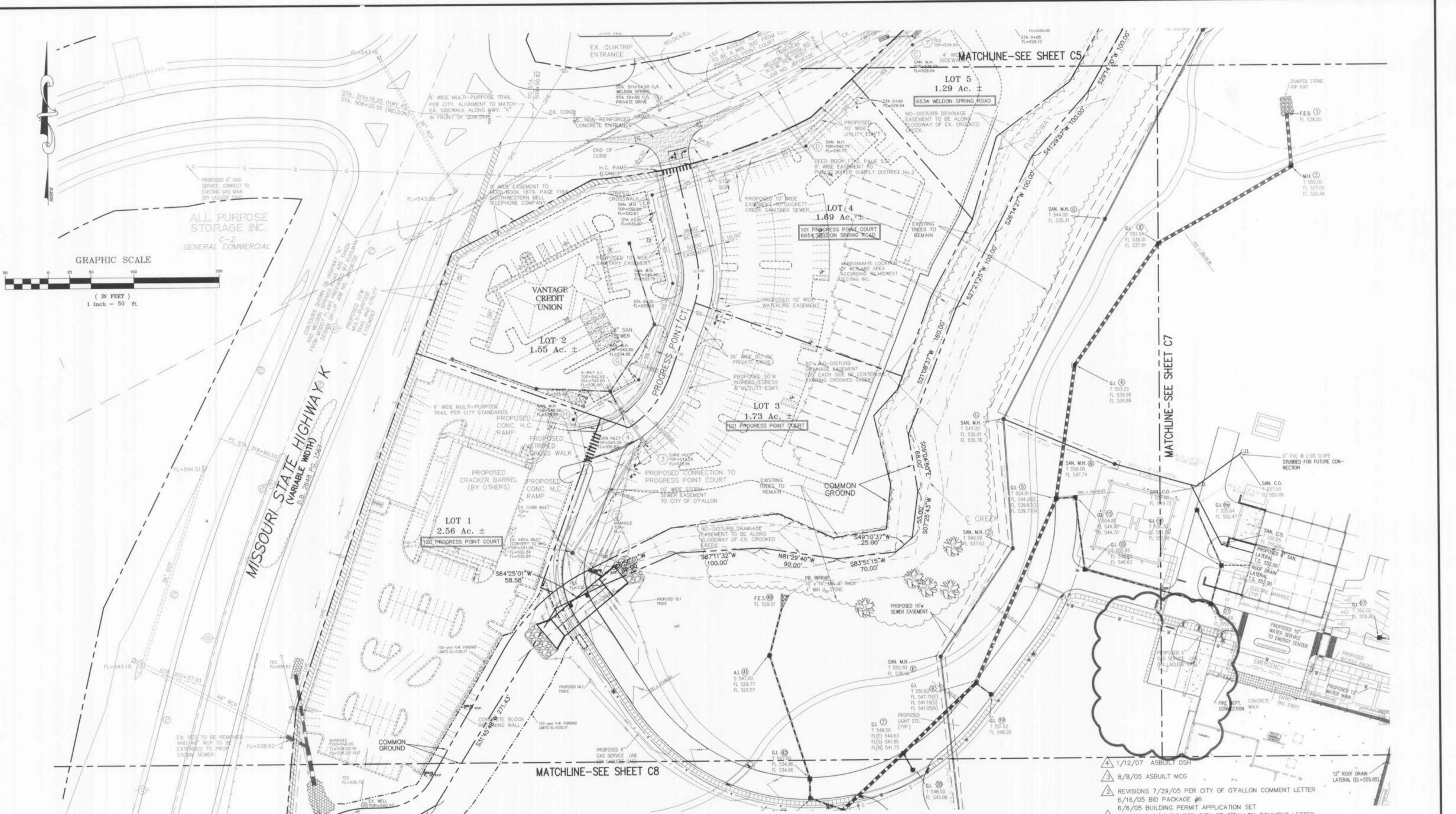
ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

Randall S. Rosson
RANDALL S. ROSSON, MISSOURI P.L.S. NO. 000000000
STATE OF MISSOURI
PROFESSIONAL LAND SURVEYOR
PLS-200600011

- 1/12/07 ASBUILT DSH
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- 6/6/05 BUILDING PERMIT APPLICATION SET
- REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER

PROGRESS WEST	
SITE AND GRADING PLAN	
Stock & Associates	
Consulting Engineers, Inc.	
DRAWN BY: GEORGE M. STOCK E-25116 DATE: 05.09.05	CHECKED BY: G.M.S. DATE: 05.09.05
JOB NUMBER: 204-3224 SHEET: 2 of 16	

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com



ALL PURPOSE STORAGE INC.
C-2 GENERAL COMMERCIAL

MATCHLINE-SEE SHEET C8

MATCHLINE-SEE SHEET C7

MATCHLINE-SEE SHEET C5

AS-BUILT

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Randall S. Rosson
RANDALL S. ROSSON, MISSOURI P.L.S. NO. 2000000111



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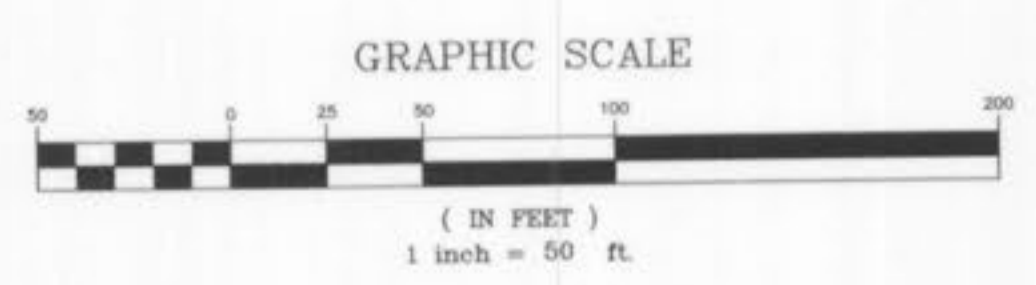
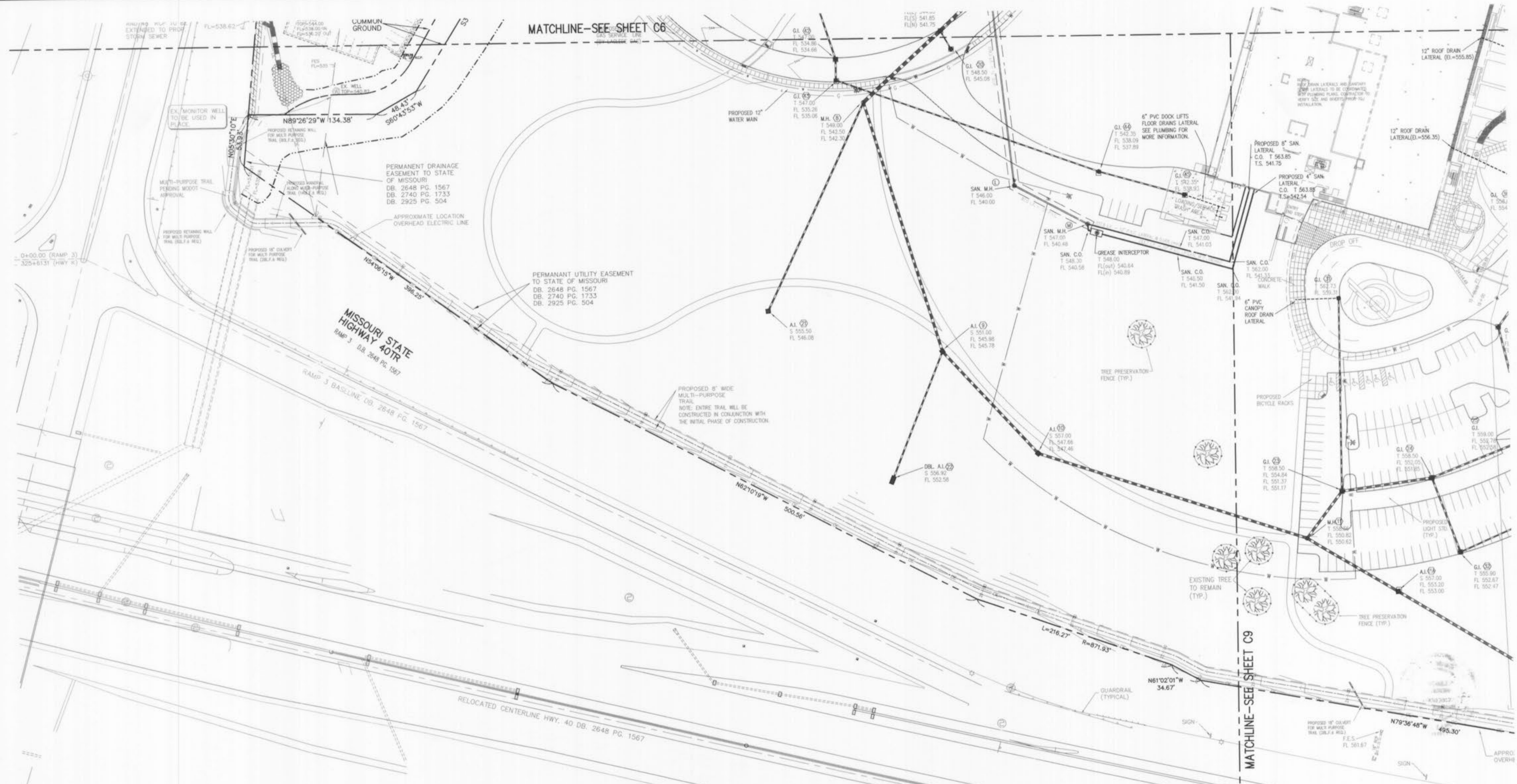
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GEORGE M. STOCK E-25116	J.E.F.	05.09.05	G.M.S.	05.09.05	204-3224	3 of 16
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P & Z FILE NUMBER: 99104-09-03



AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

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Randall S. Rosson
RANDALL S. ROSSON, MISSOURI P.E. NO. 0000000171 DATE PLS-2006000171

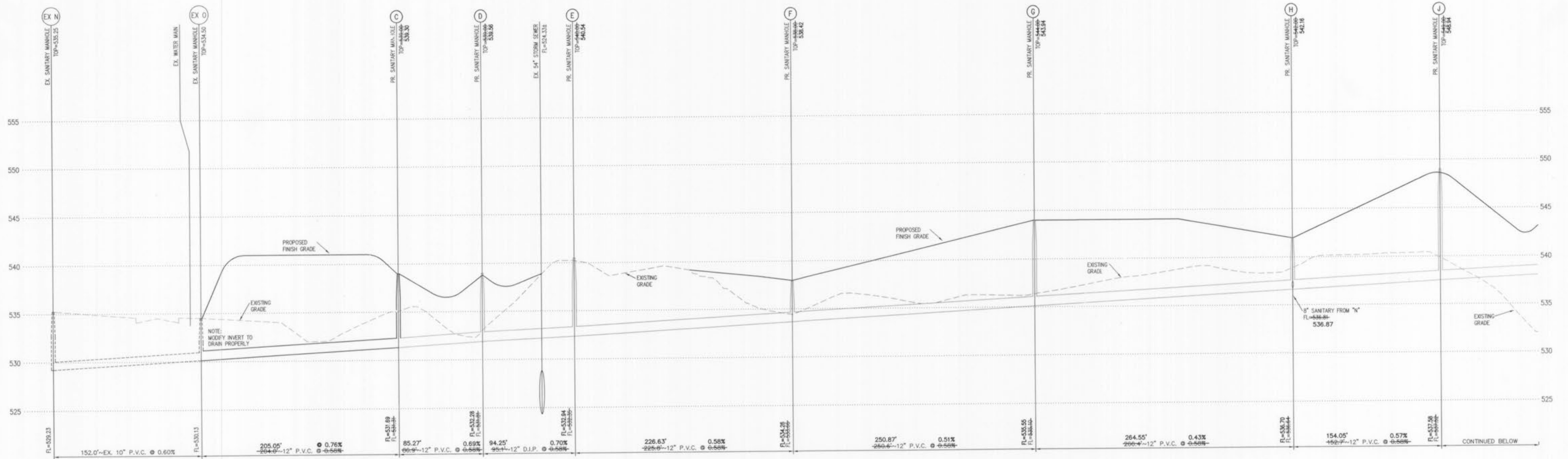
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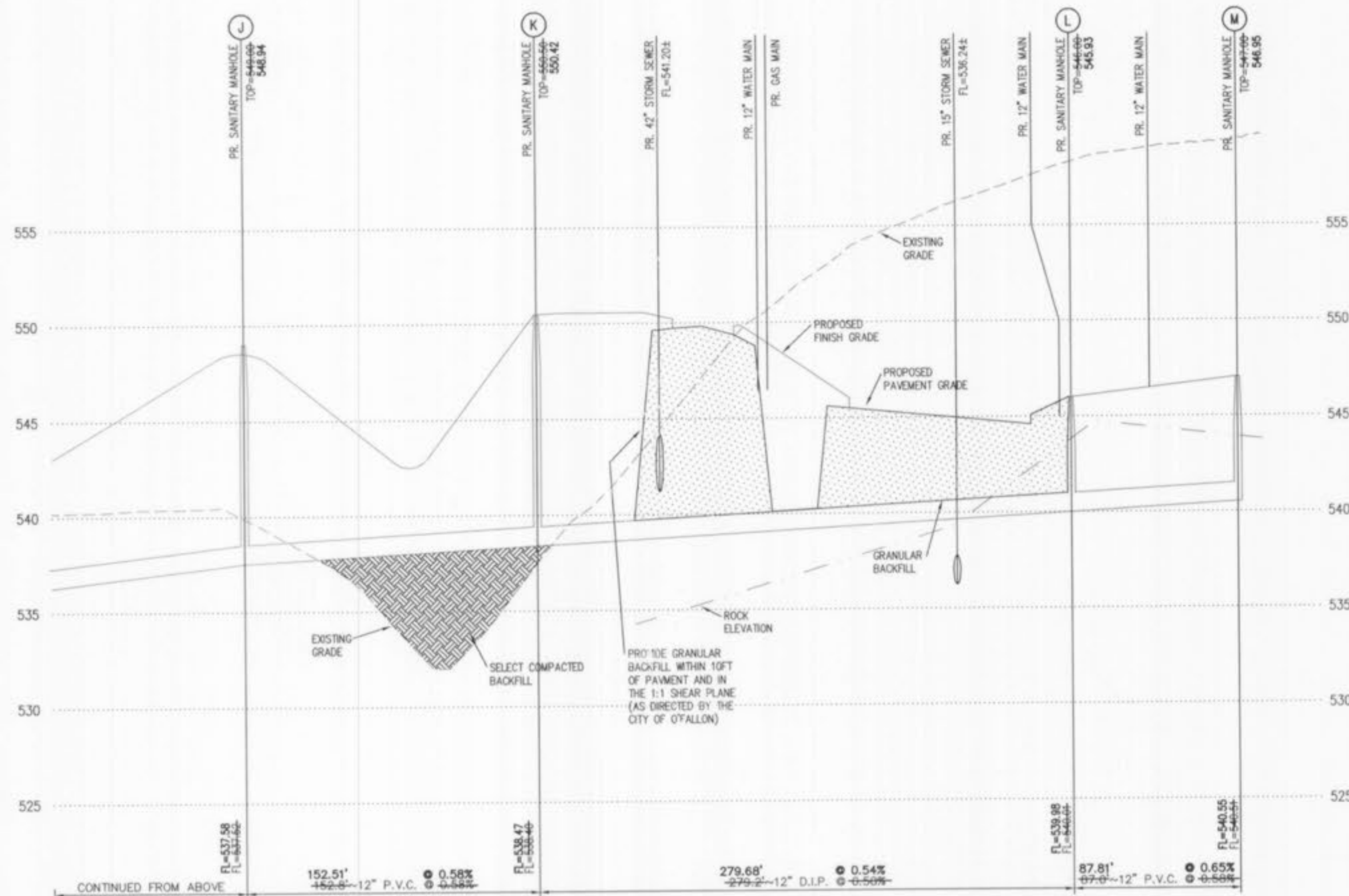
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DRAWN BY: GEORGE M. STOCK	DATE: 05.09.05	CHECKED BY: J.E.F.	DATE: 05.09.05	DATE: 05.09.05	JOB NUMBER: 204-3224	SHEET: 5 of 16
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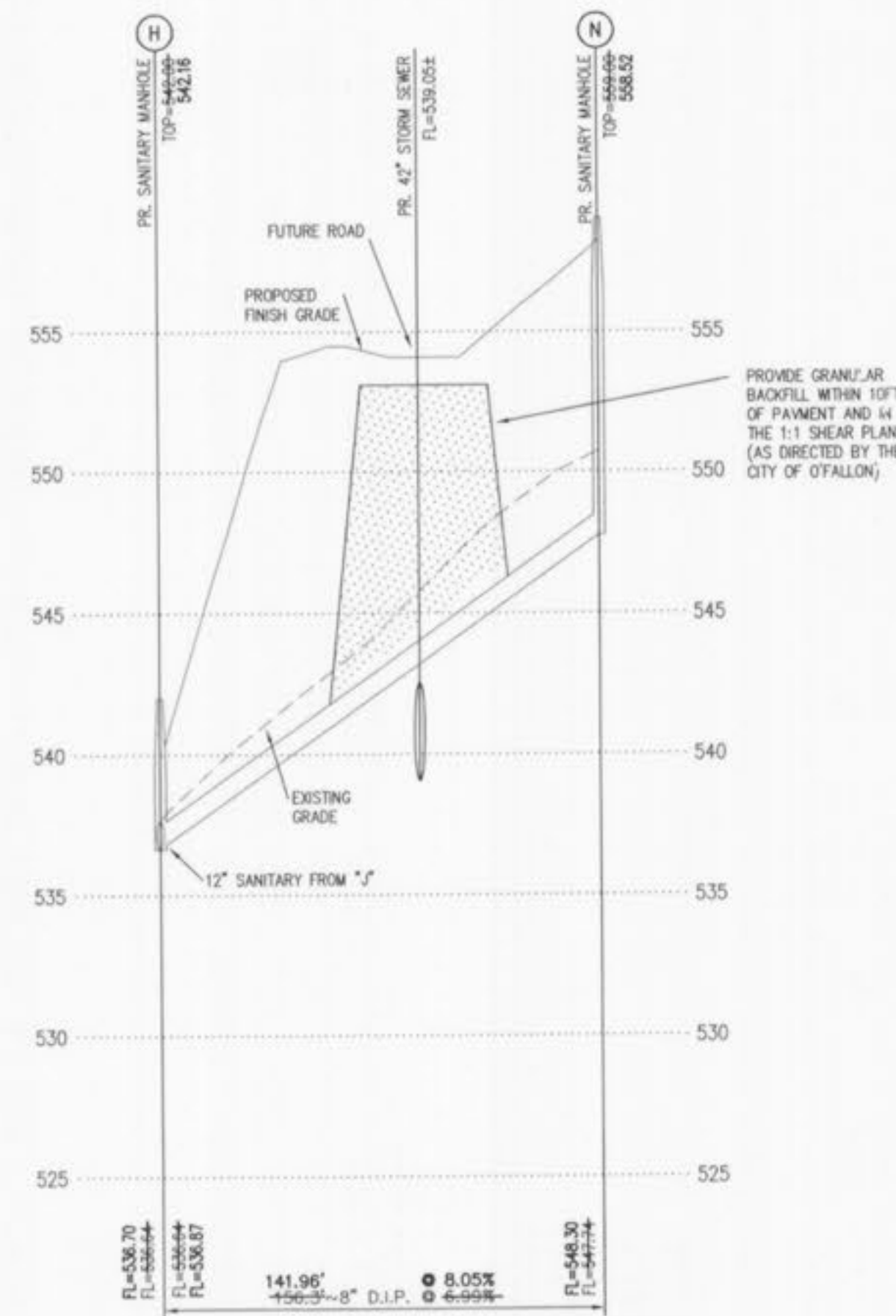
SANITARY SEWER PROFILE

SCALE: 1"=50' (H) 1"=5' (V)



SANITARY SEWER PROFILE

SCALE: 1"=50' (H) 1"=5' (V)



NOTE:
ALL SANITARY SEWER MANHOLES SHALL BE 48"
INSIDE DIAMETER WITH LOCK-TYPE, WATER-TIGHT LID.

AS-BUILT

SEWER AND WATER LINE MEASUREMENTS

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Randall S. Rossor
RANDALL S. ROSSOR, MISSOURI P.L.S. #2810, LICENSE #1
PROFESSIONAL LAND SURVEYOR

LINETYPE LEGEND

EXISTING GRADE.....	---
PROPOSED GRADE.....	---
ESTIMATED ROCK GRADE.....	---
HYDRAULIC GRADE.....	---
PROPOSED PAVEMENT.....	---
GRANULAR BACKFILL.....	---
COMPACTED FILL.....	---

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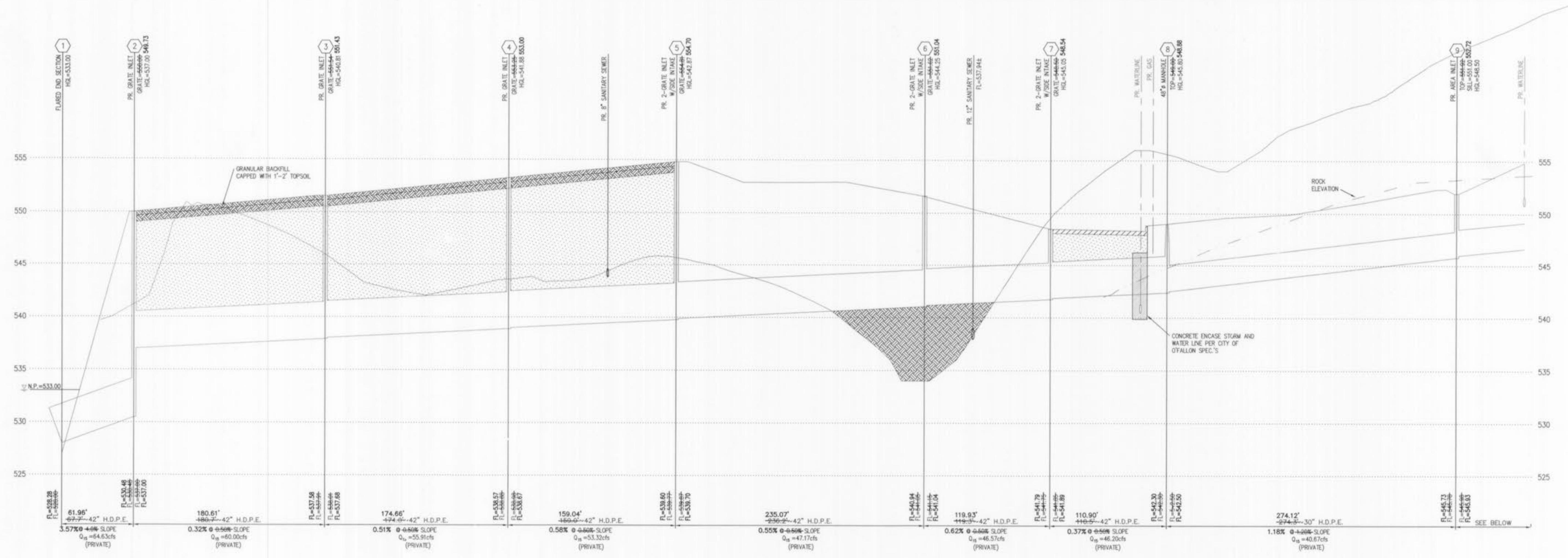
PROGRESS WEST
SANITARY SEWER PROFILES

Stock & Associates
Consulting Engineers, Inc.

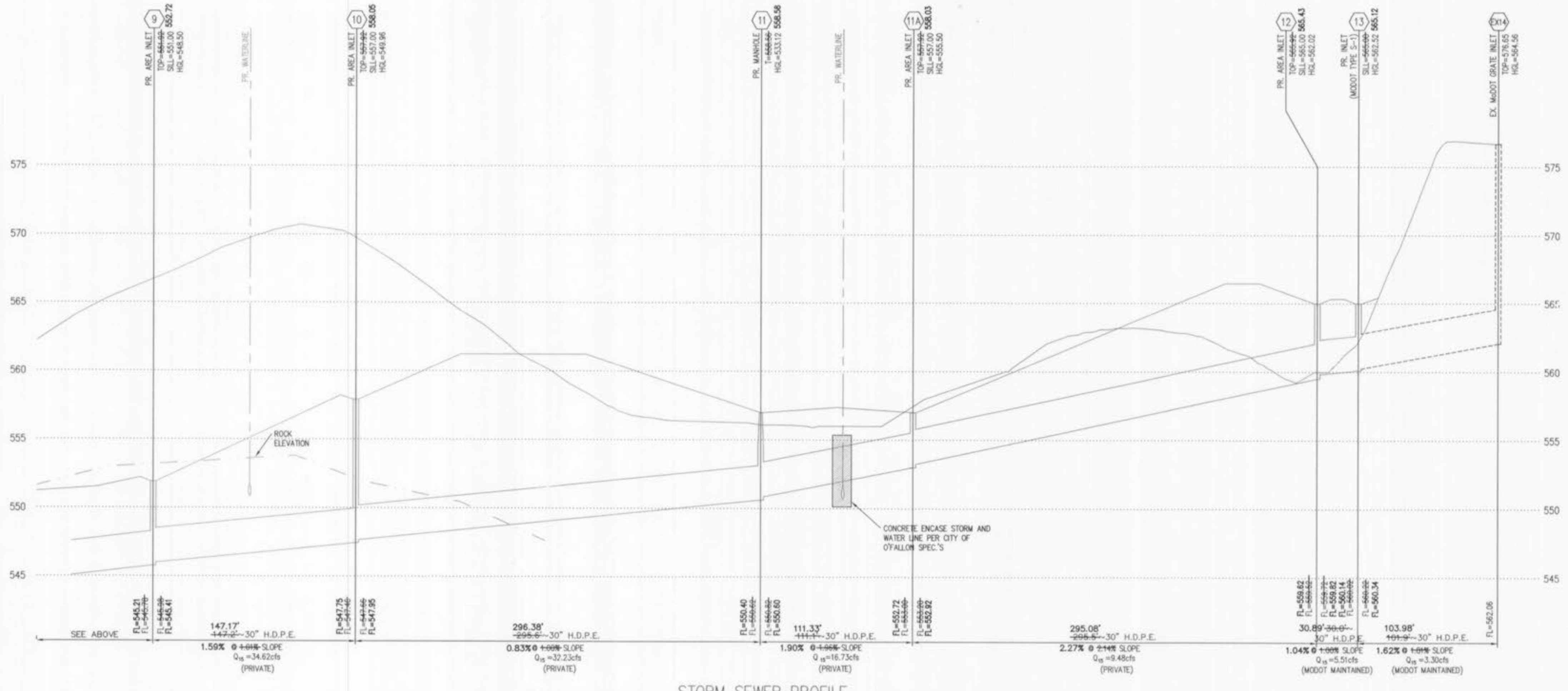
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DATE: 05.09.05	CHECKED BY: G.M.S.	DATE: 05.09.05	JOB NUMBER: 204-3224	SHEET: 7 of 16
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GEORGE M. STOCK E-25116



STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)



STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)

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Randall S. Rosson
RANDALL S. ROSSON, MISSOURI P.L.C. NO. 2000000178
MISSOURI PROFESSIONAL LAND SURVEYOR
PLS-2099900178

LINETYPE LEGEND

- EXISTING GRADE.....
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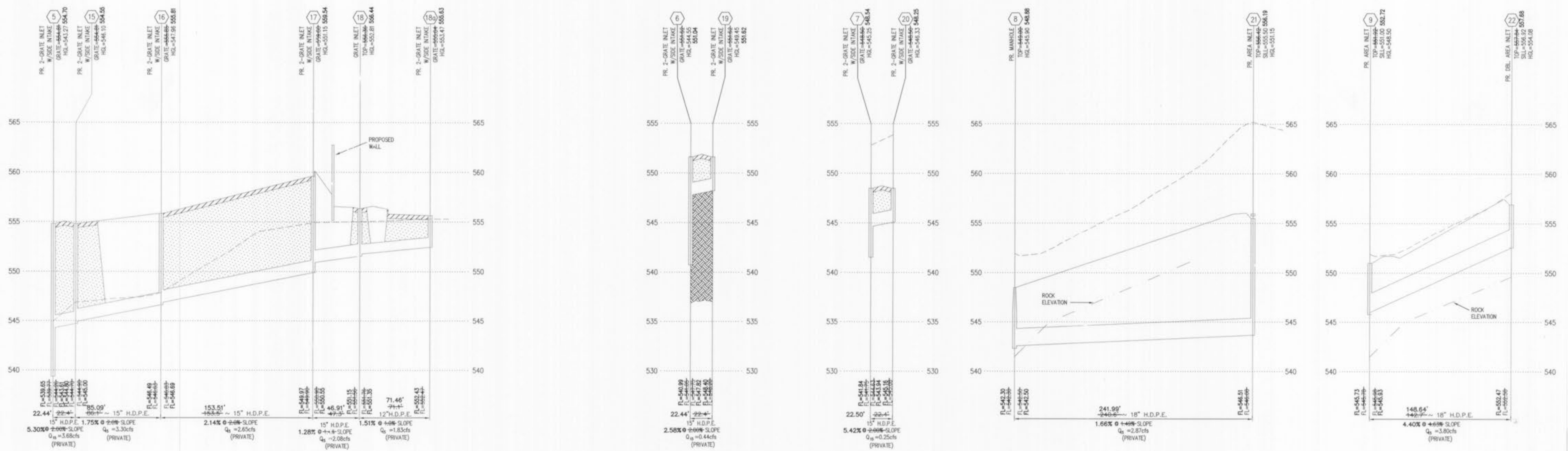
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STORM SEWER PROFILES

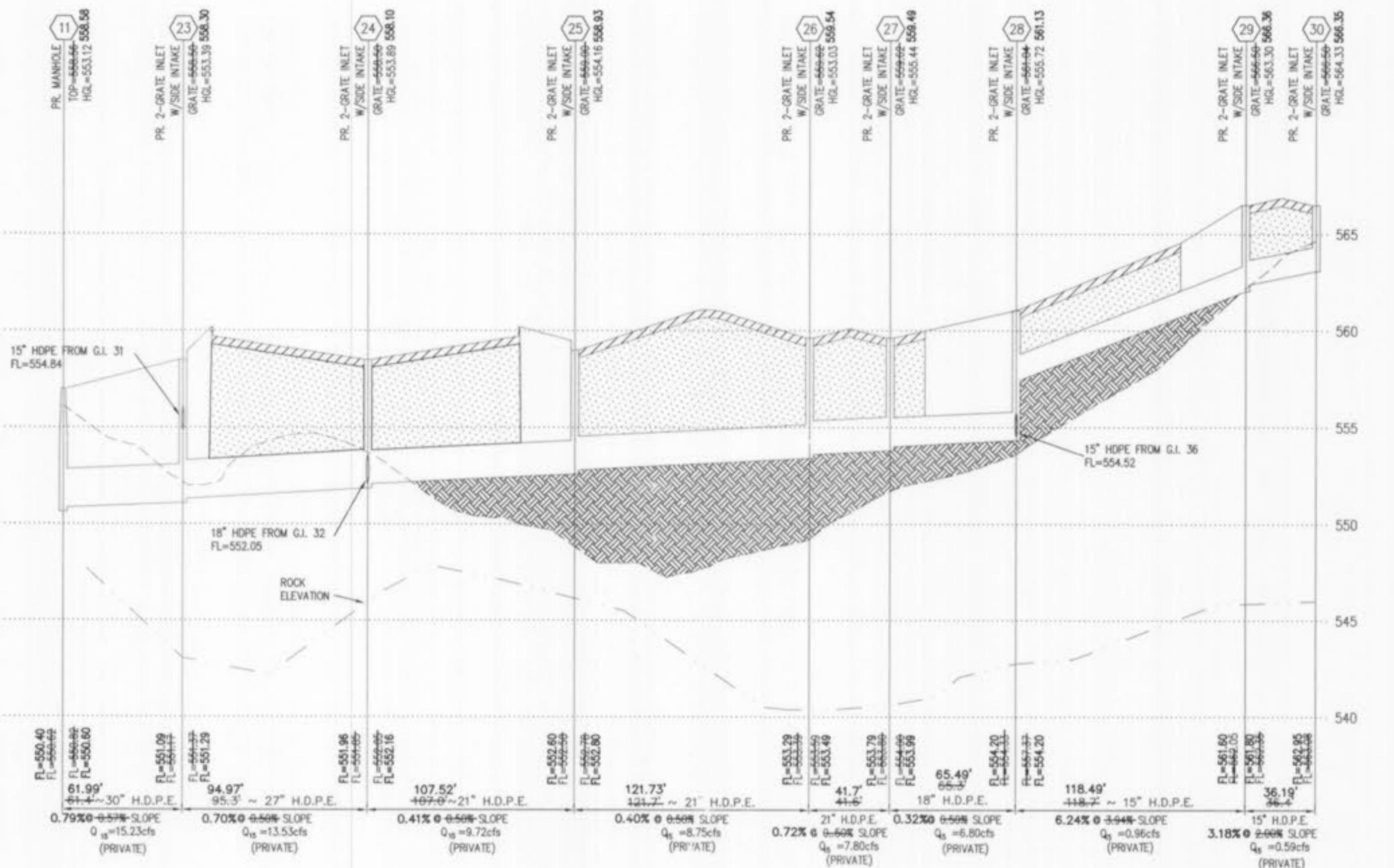
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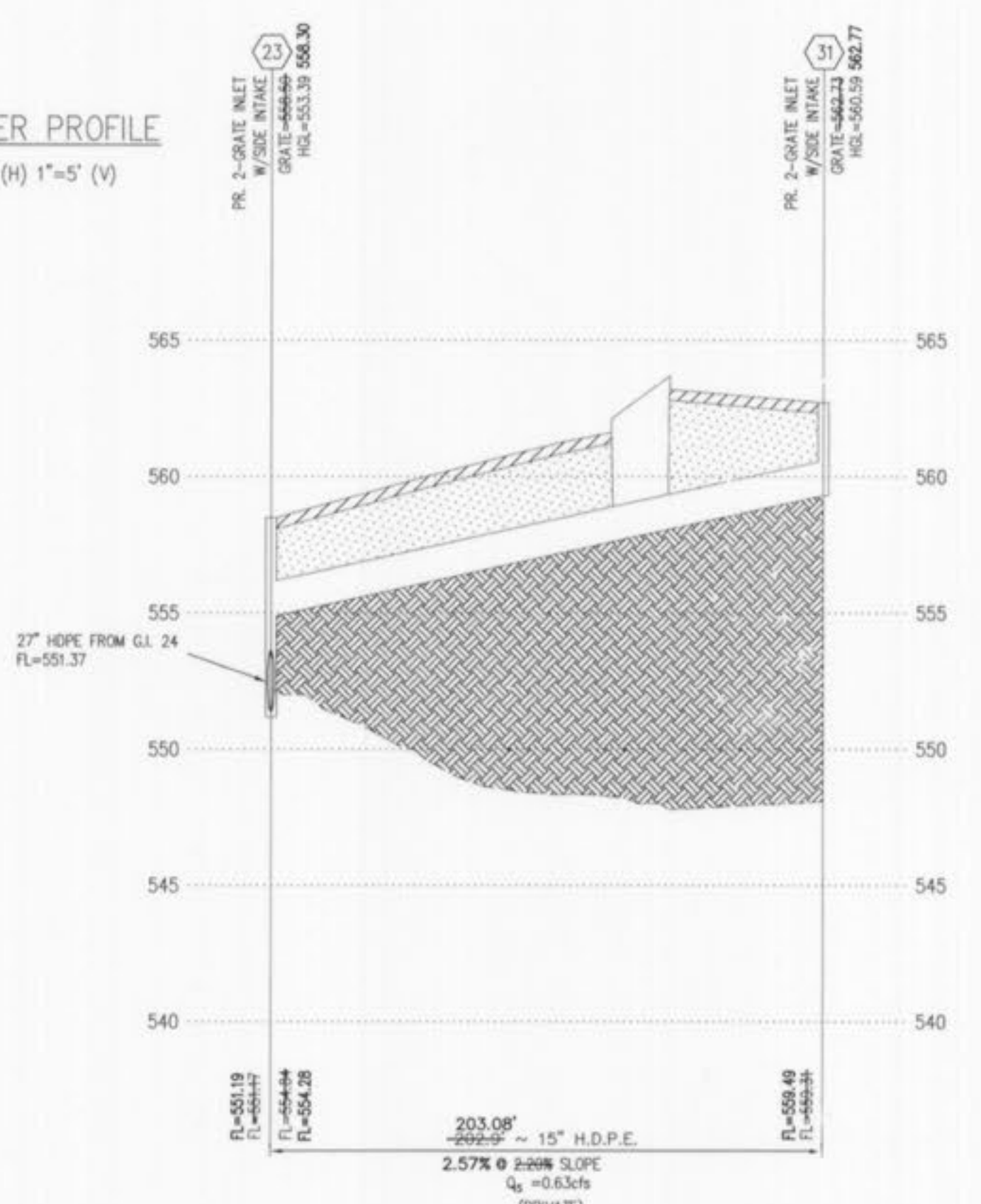
GEORGE M. STOCK	E-25116	J.E.F.	05.09.05	G.M.S.	05.09.05	204-3224	8 of 16
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STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)



STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)



AS-BUILT

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Randall S. Rossion
RANDALL S. ROSSION, MISSOURI LICENSE NO. 000000711 DATE 12/15/05

LINETYPE LEGEND

- EXISTING GRADE.....
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- HYDRAULIC GRADE.....
- PROPOSED PAVEMENT.....
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- COMPACTED FILL.....

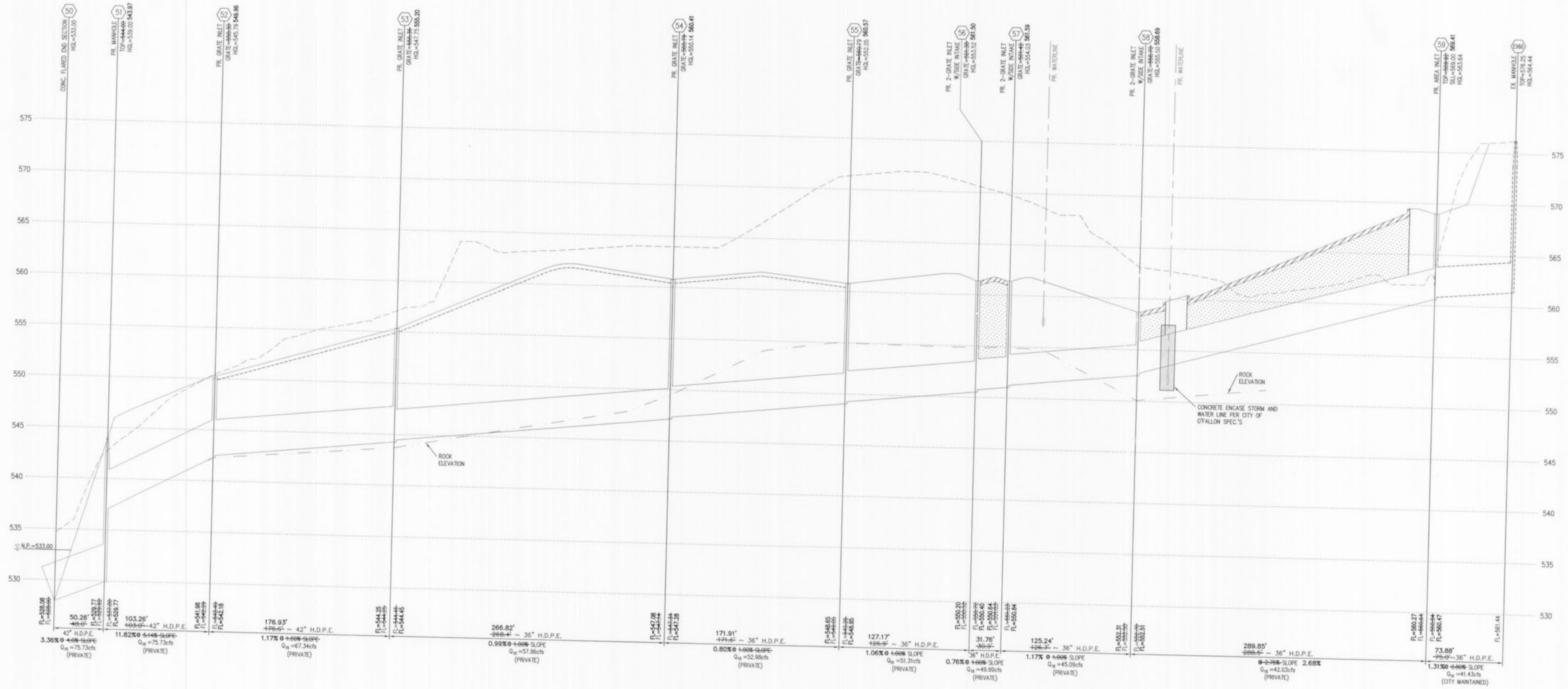
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STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)

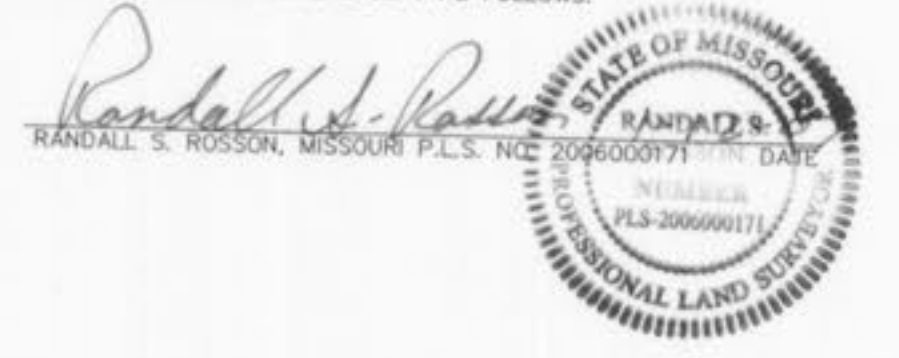
LINETYPE LEGEND

EXISTING GRADE.....
PROPOSED GRADE.....
ESTIMATED ROCK GRADE.....
HYDRAULIC GRADE.....
PROPOSED PAVEMENT.....
GRANULAR BACKFILL.....
COMPACTED FILL.....

AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

THE EXISTING WATER MAIN (PER STAKED OUT LOCATION), EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS NOTED:

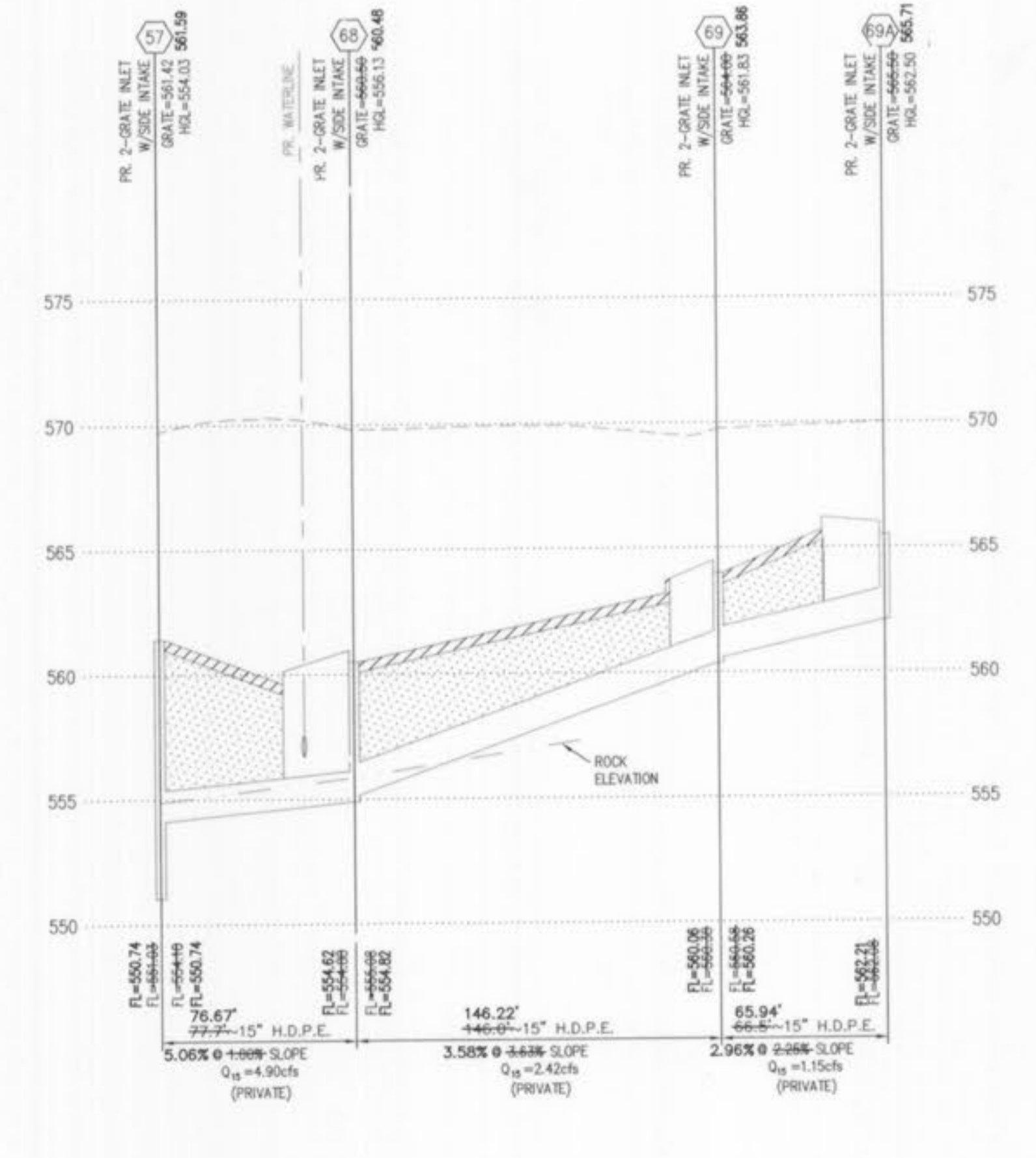
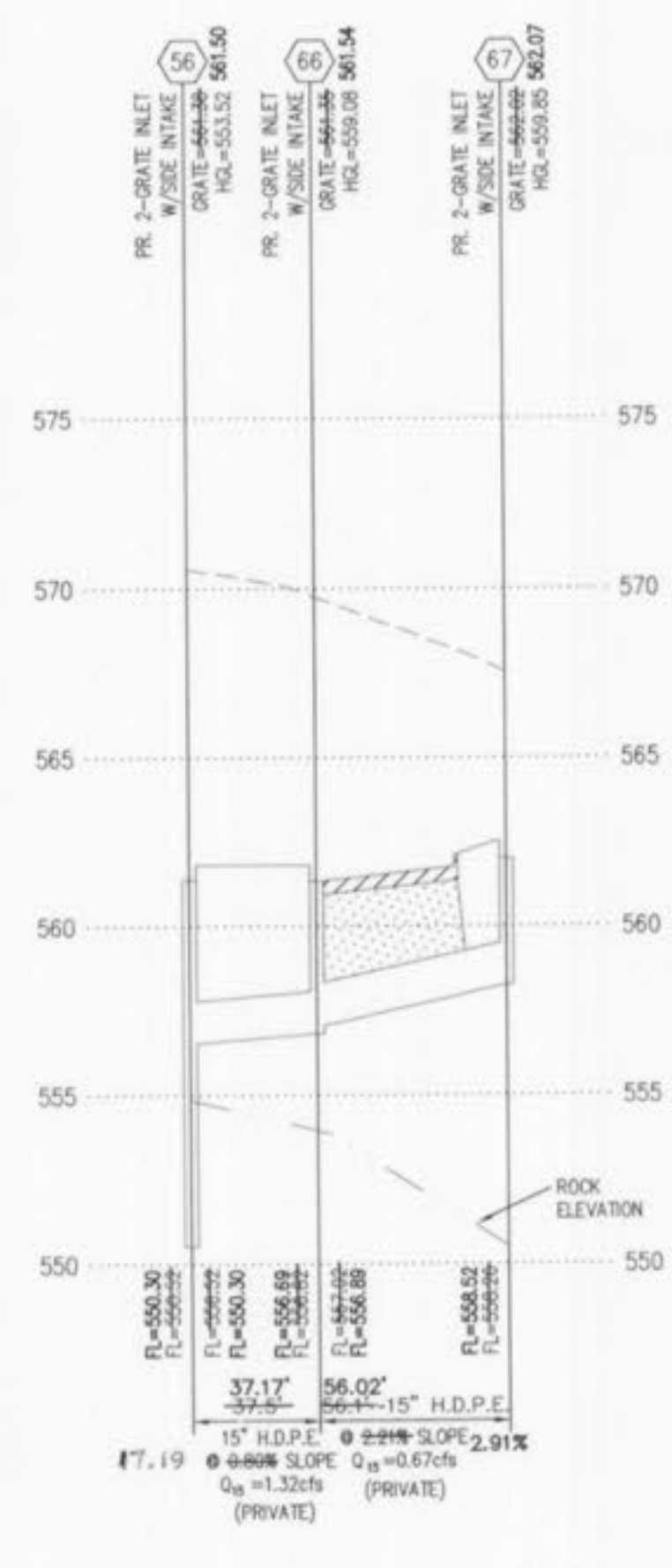
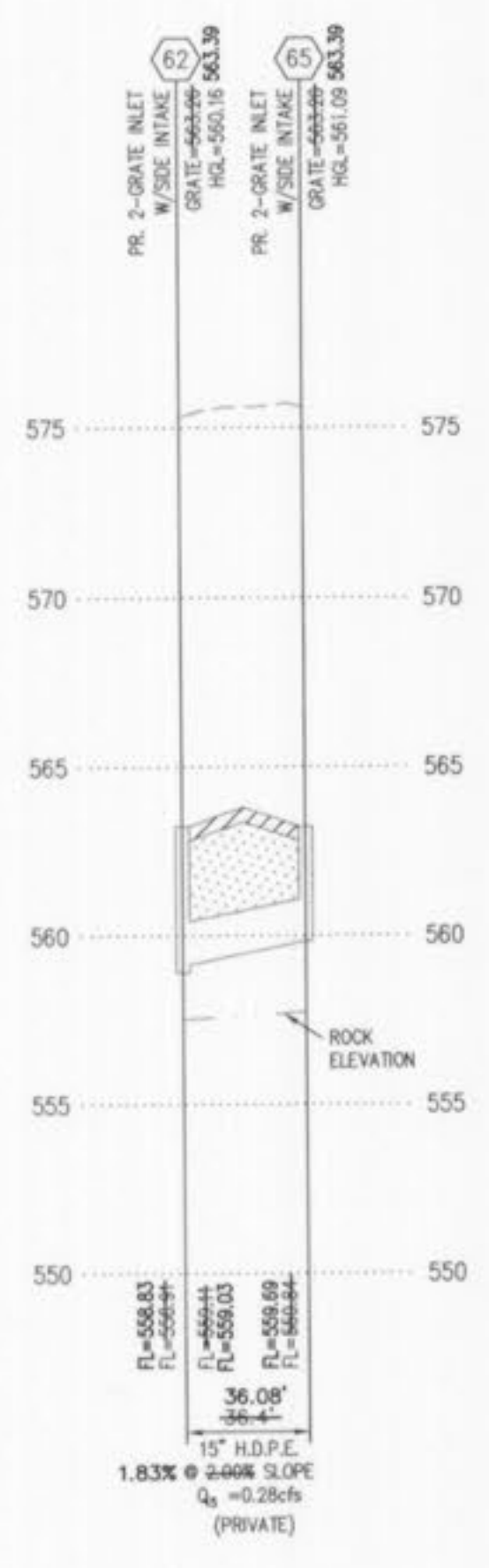
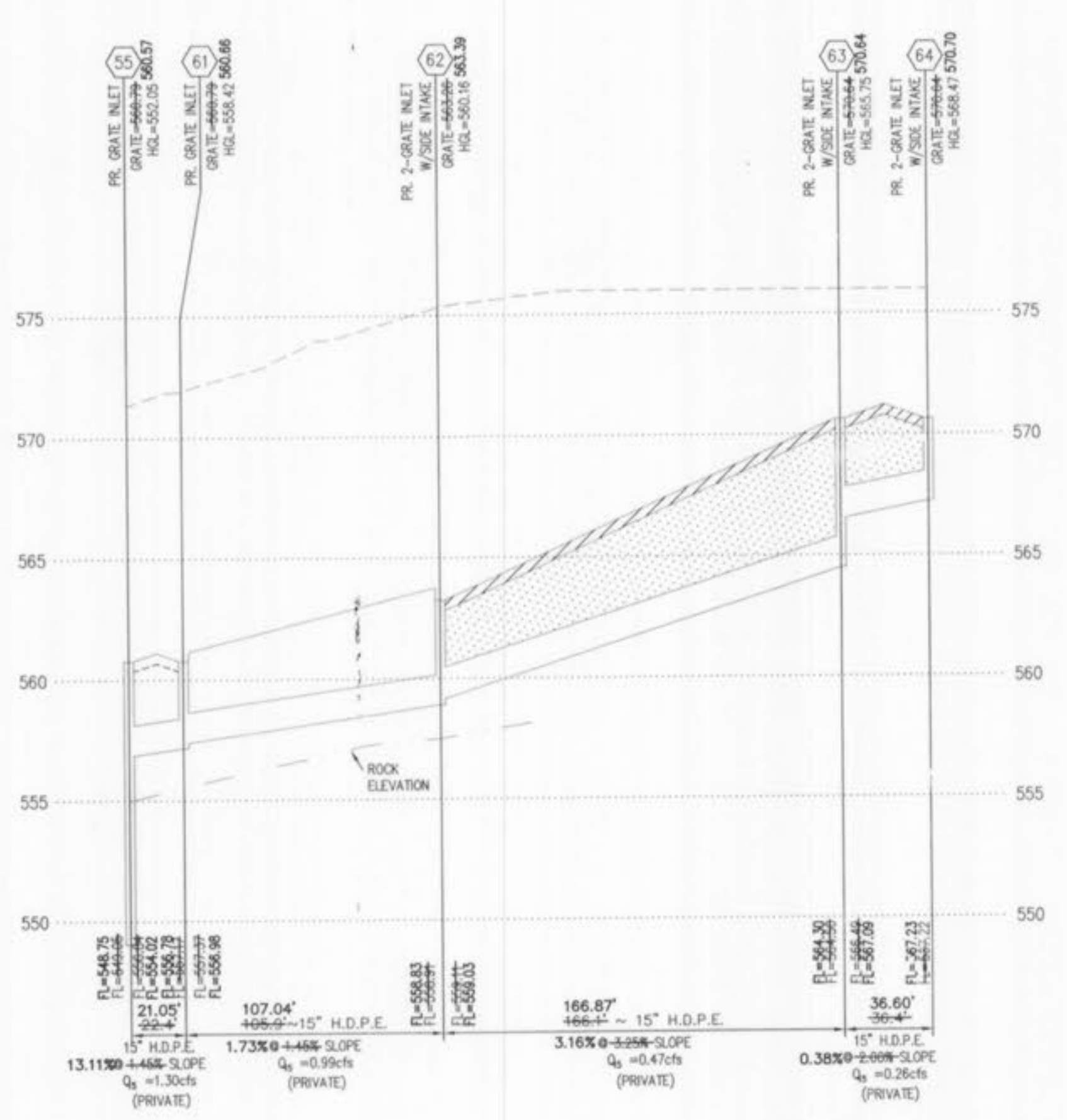


- 1/12/07 ASBUILT DSH
- 8/8/05 ASBUILT MCG
- REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER
- 6/16/05 BID PACKAGE #6
- 6/6/05 BUILDING PERMIT APPLICATION SET
- REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER

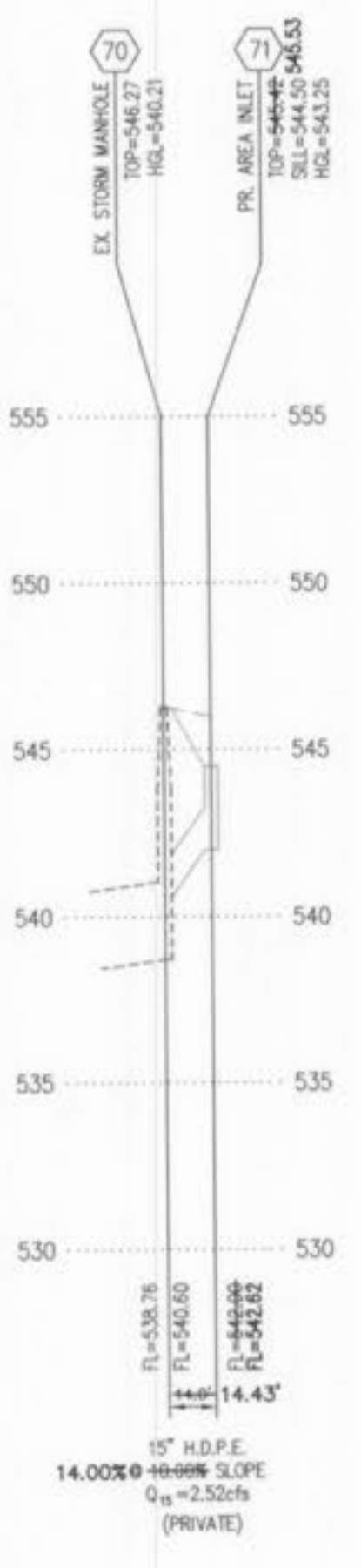
PROGRESS WEST
STORM SEWER PROFILES

<p>Stock & Associates Consulting Engineers, Inc.</p>	<p>257 Chesterfield Business Parkway St. Louis, MO 63005 PH. (636) 530-9100 FAX (636) 530-9130 e-mail: general@stockassoc.com Web: www.stockassoc.com</p>
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DRAWN BY: GEORGE M. STOCK E-25116	DATE: J.E.F. 05.09.05	CHECKED BY: G.M.S. 05.09.05	DATE: 05.09.05	JOB NUMBER: 204-3224	SHEET: 11 of 16
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STORM SEWER PROFILE
SCALE: 1"=50' (H) 1"=5' (V)



LINETYPE LEGEND

- EXISTING GRADE.....
- PROPOSED GRADE.....
- ESTIMATED ROCK GRADE.....
- HYDRAULIC GRADE.....
- PROPOSED PAVEMENT.....
- GRANULAR BACKFILL.....
- COMPACTED FILL.....

AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

THE EXISTING WATER MAIN (PER STAKED OUT LOCATION), EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

Randall S. Rosson
RANDALL S. ROSSON, MISSOURI REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 2006000171
DATE 05/12/07

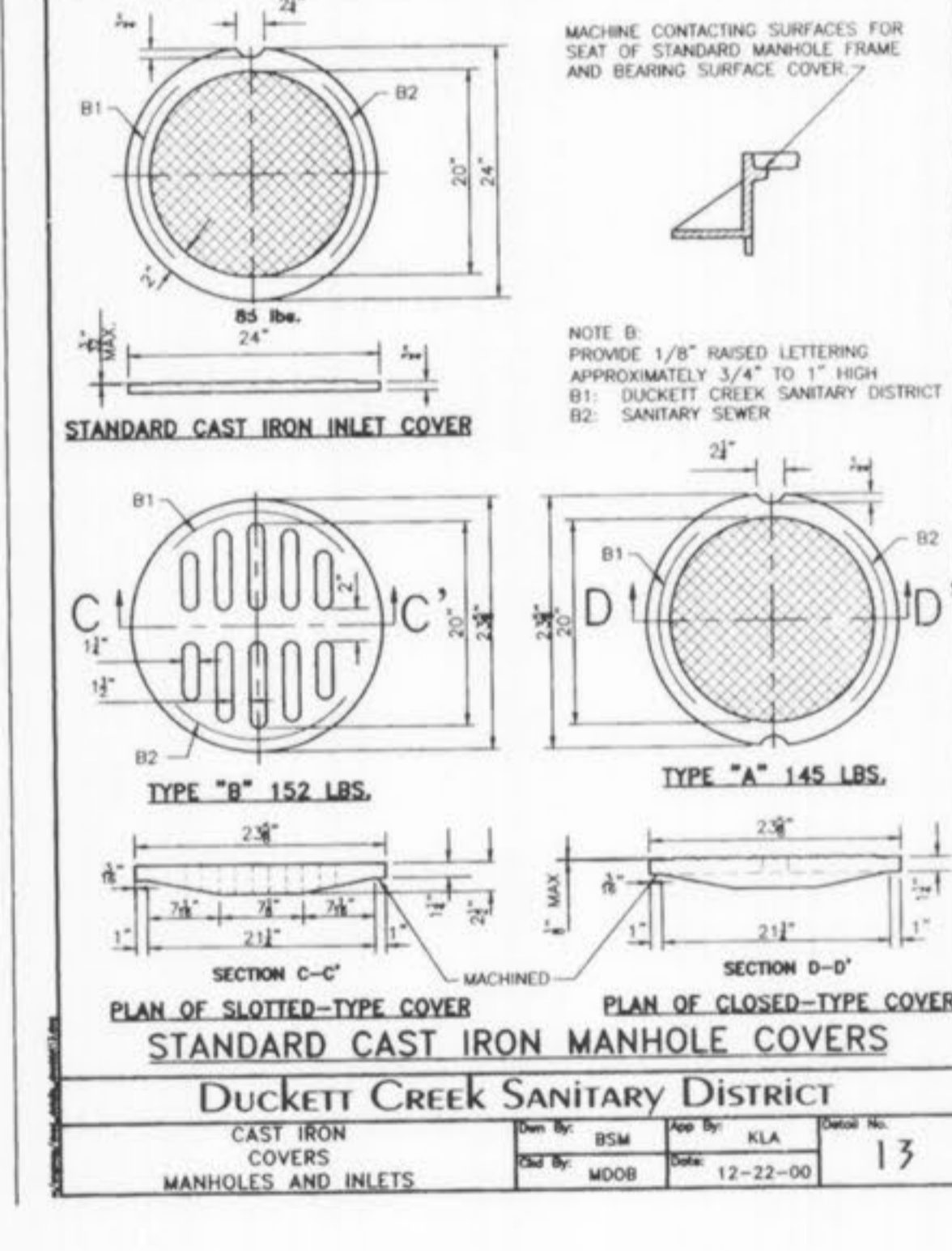
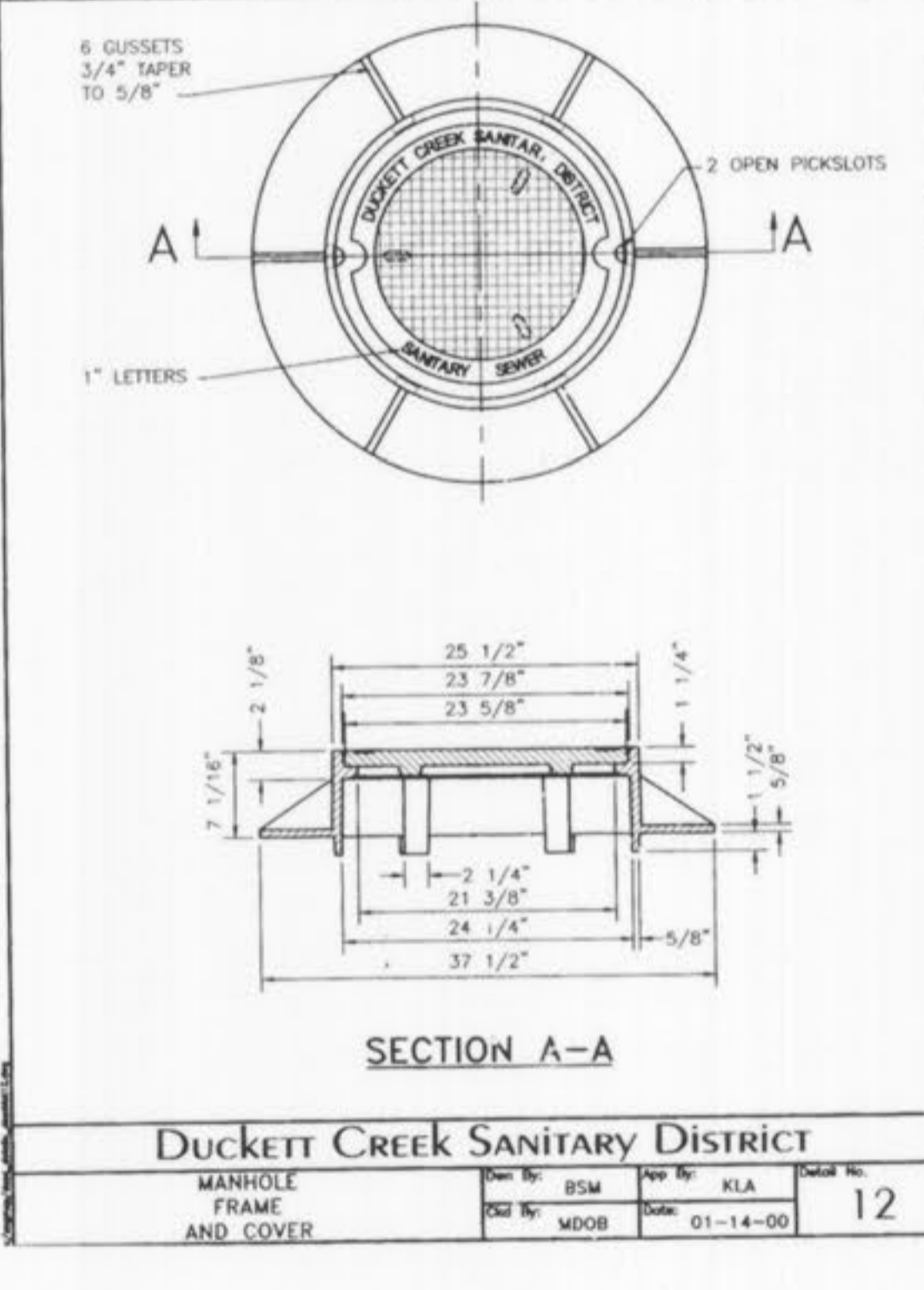
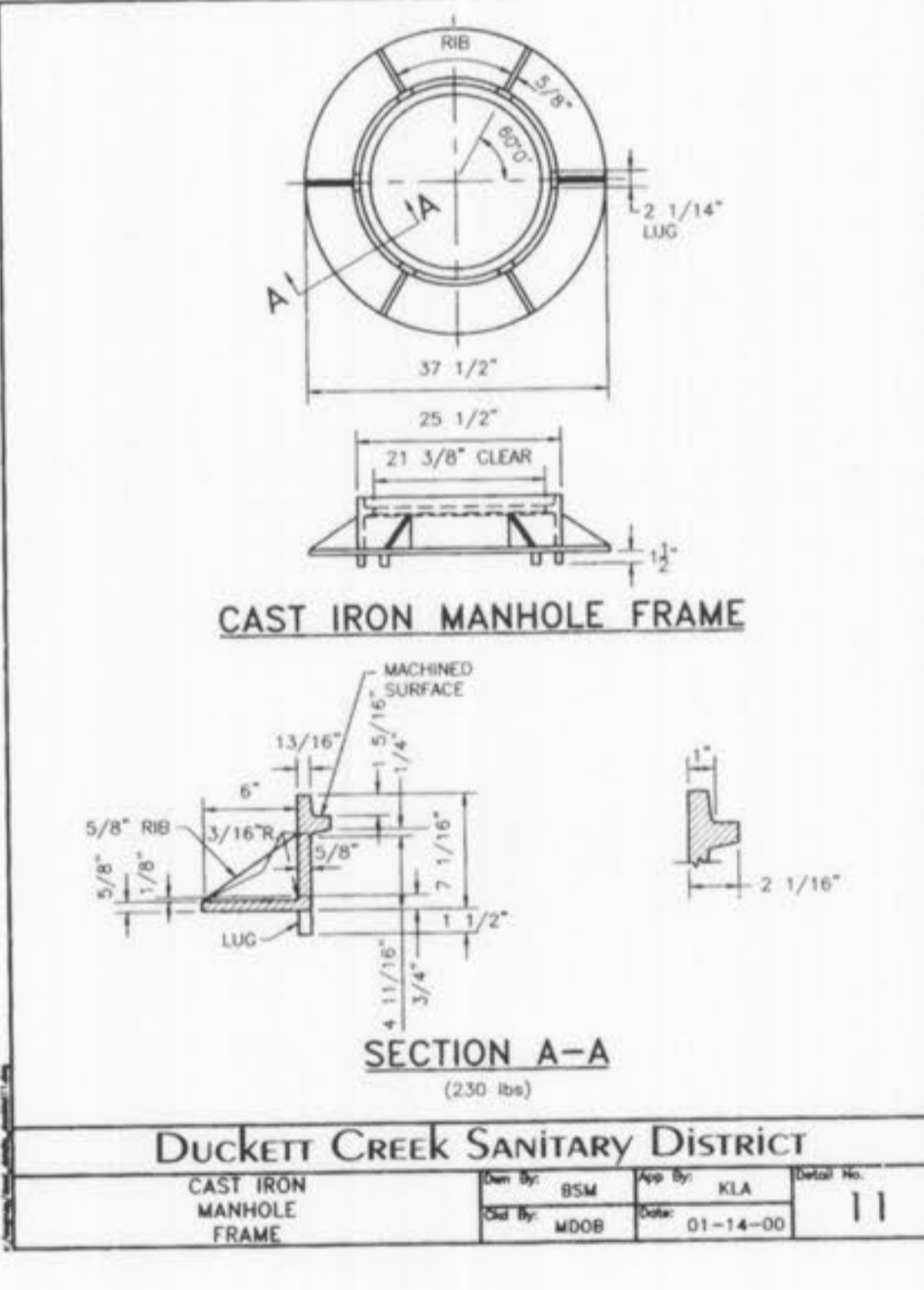
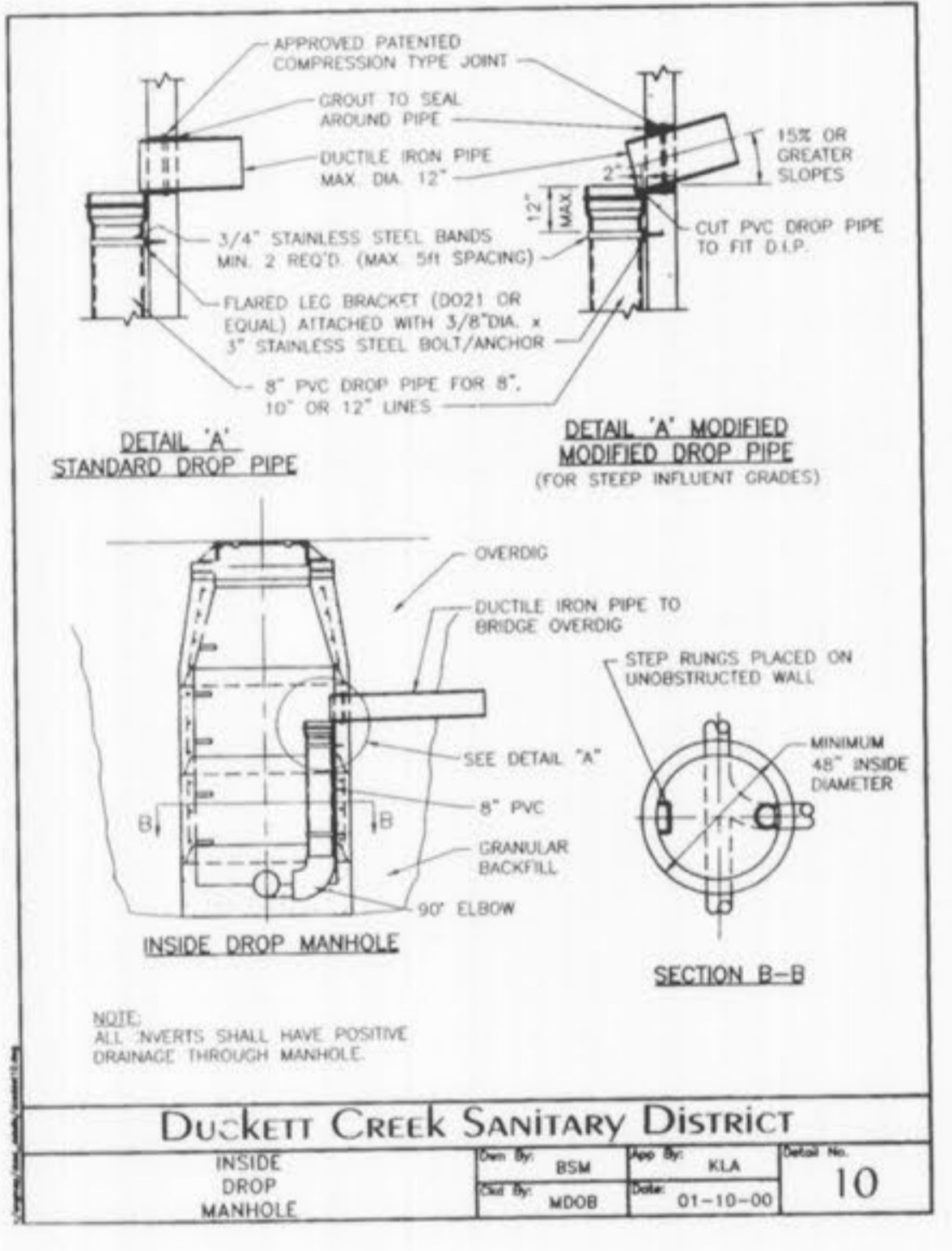
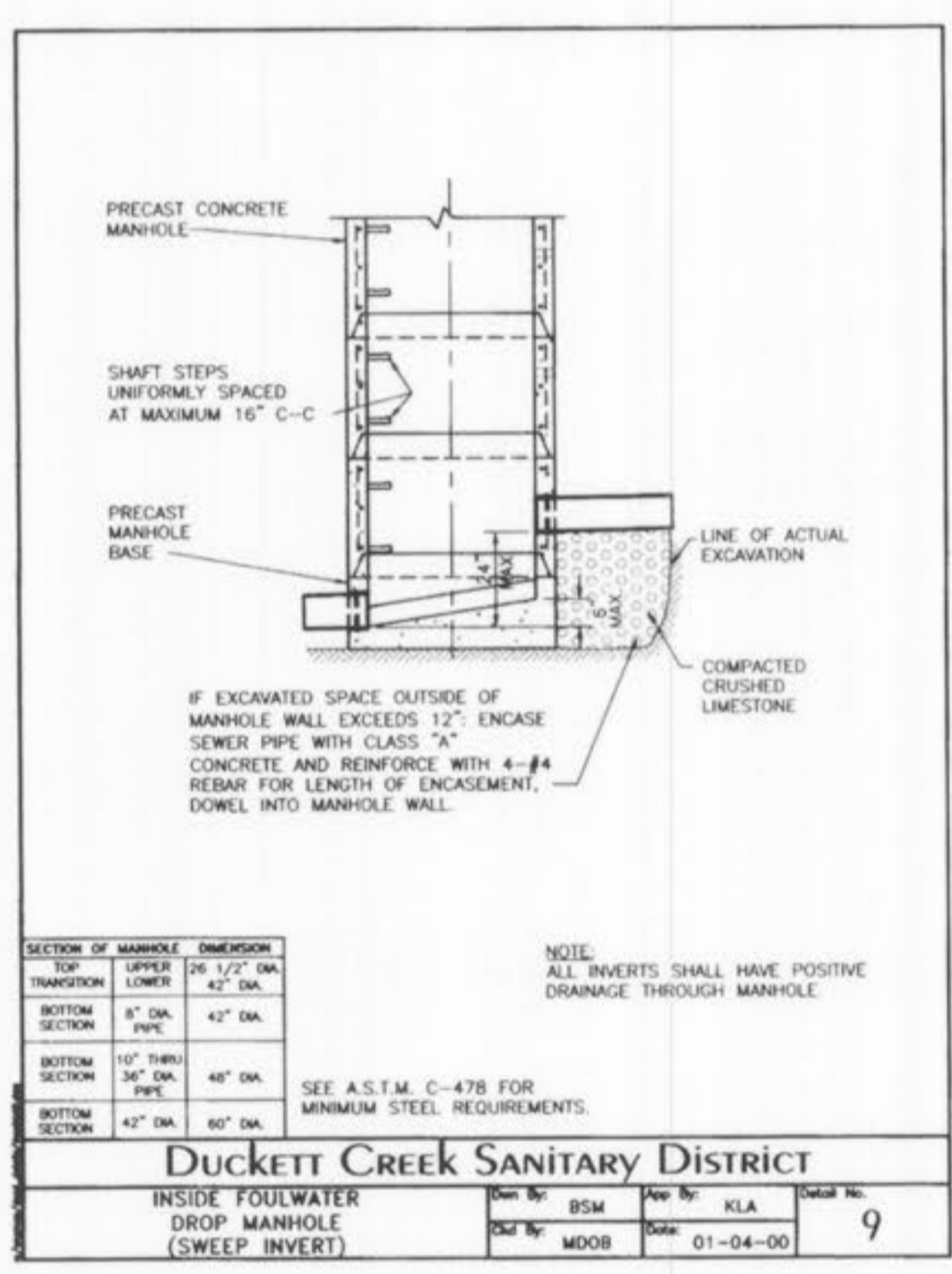
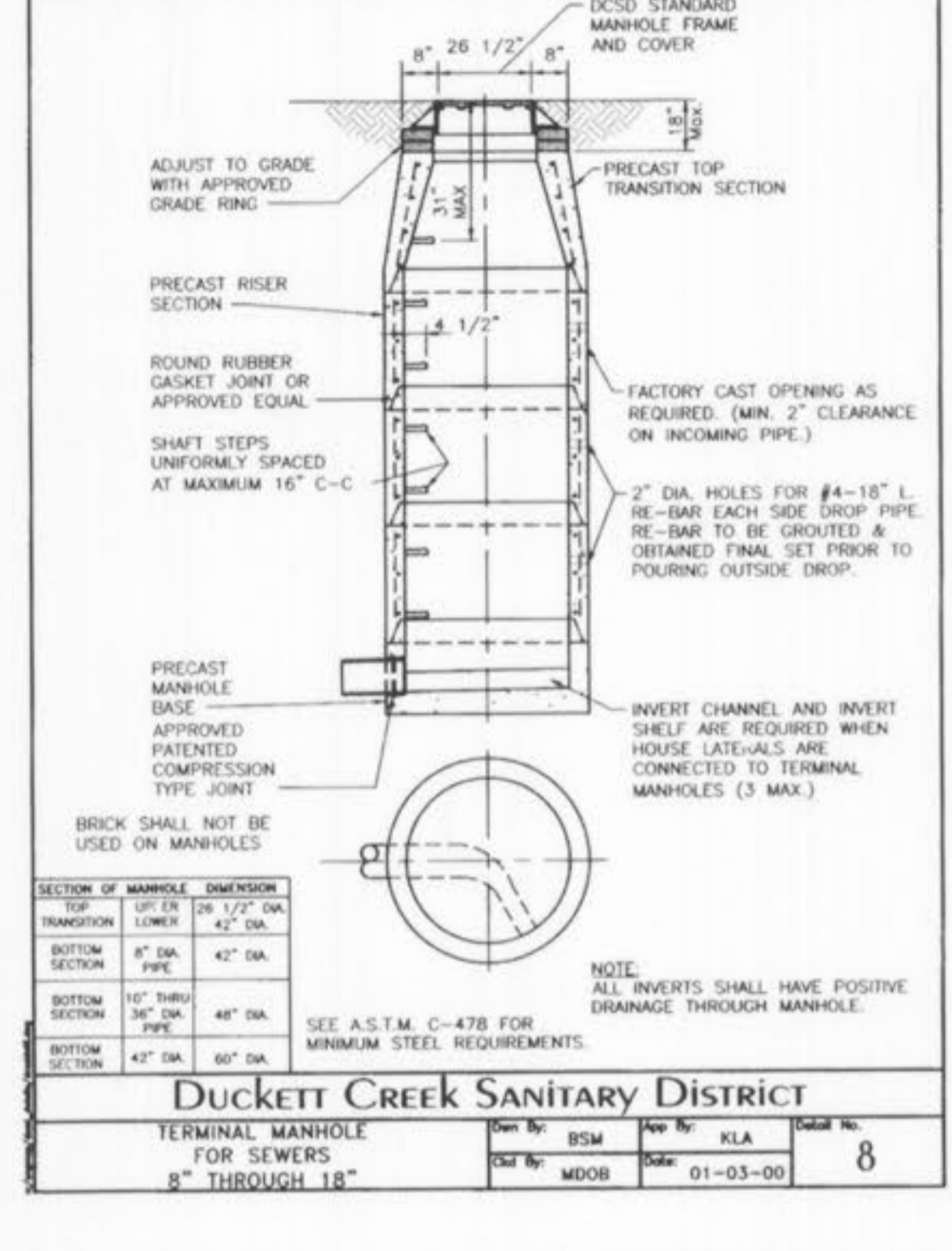
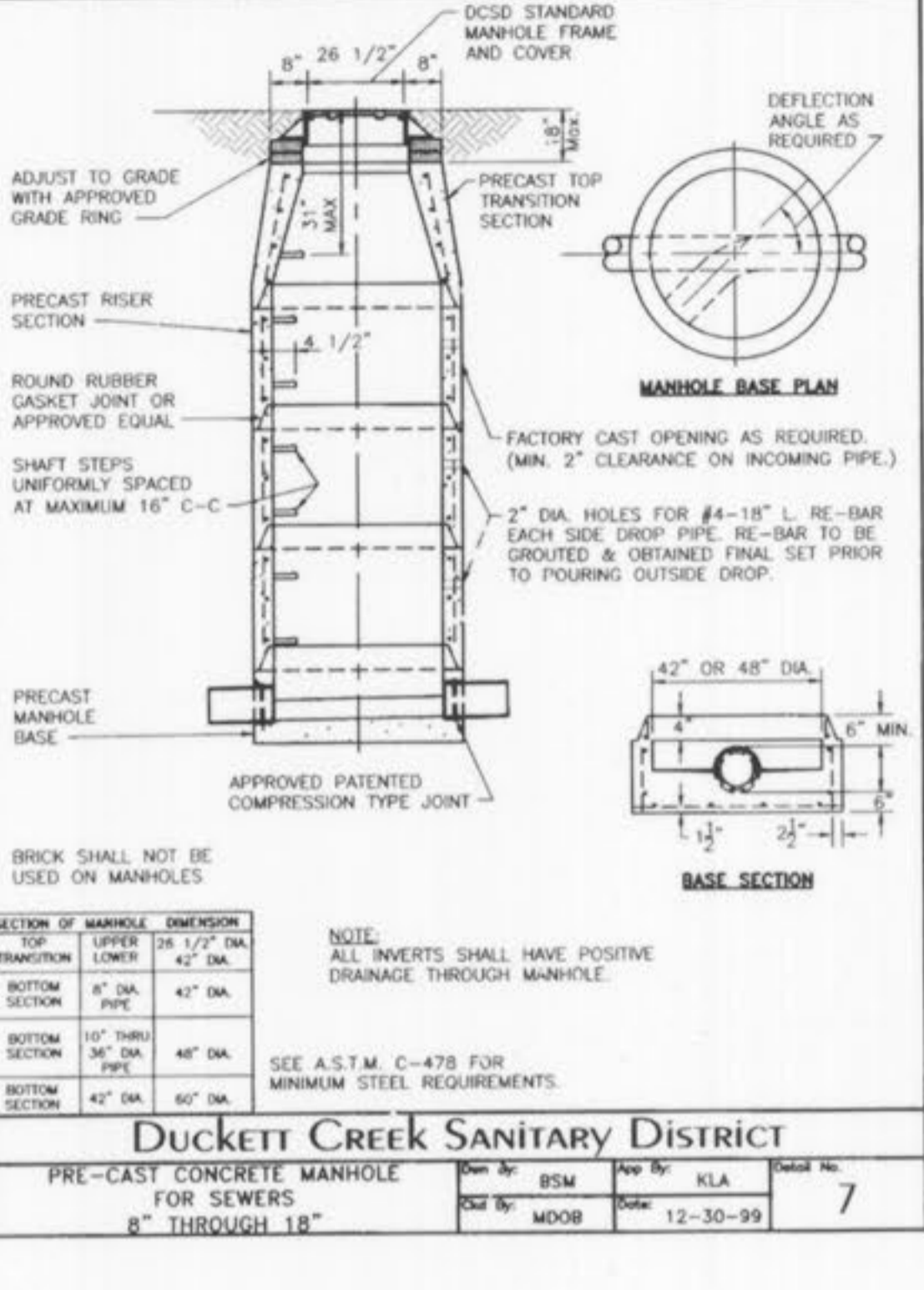
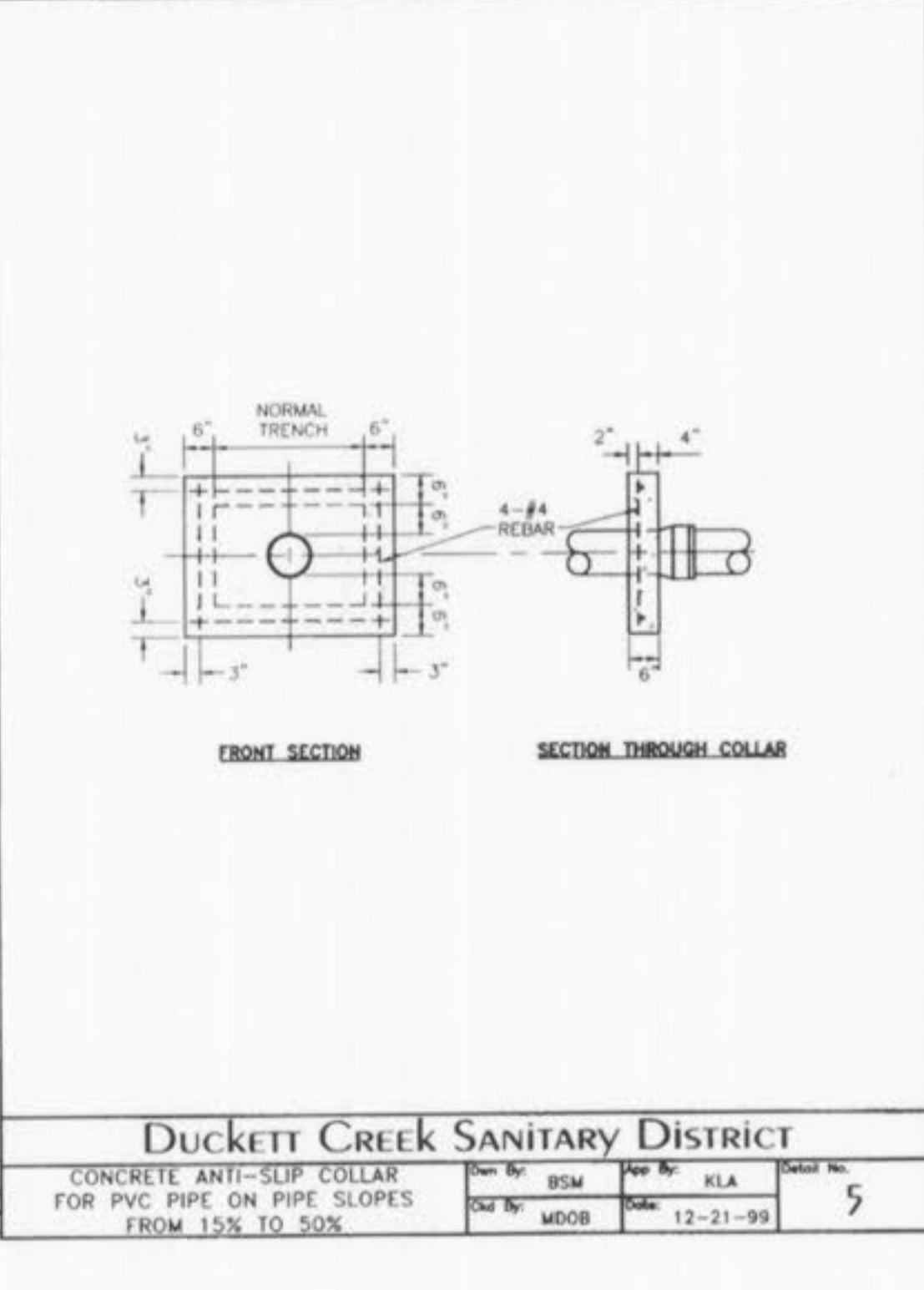
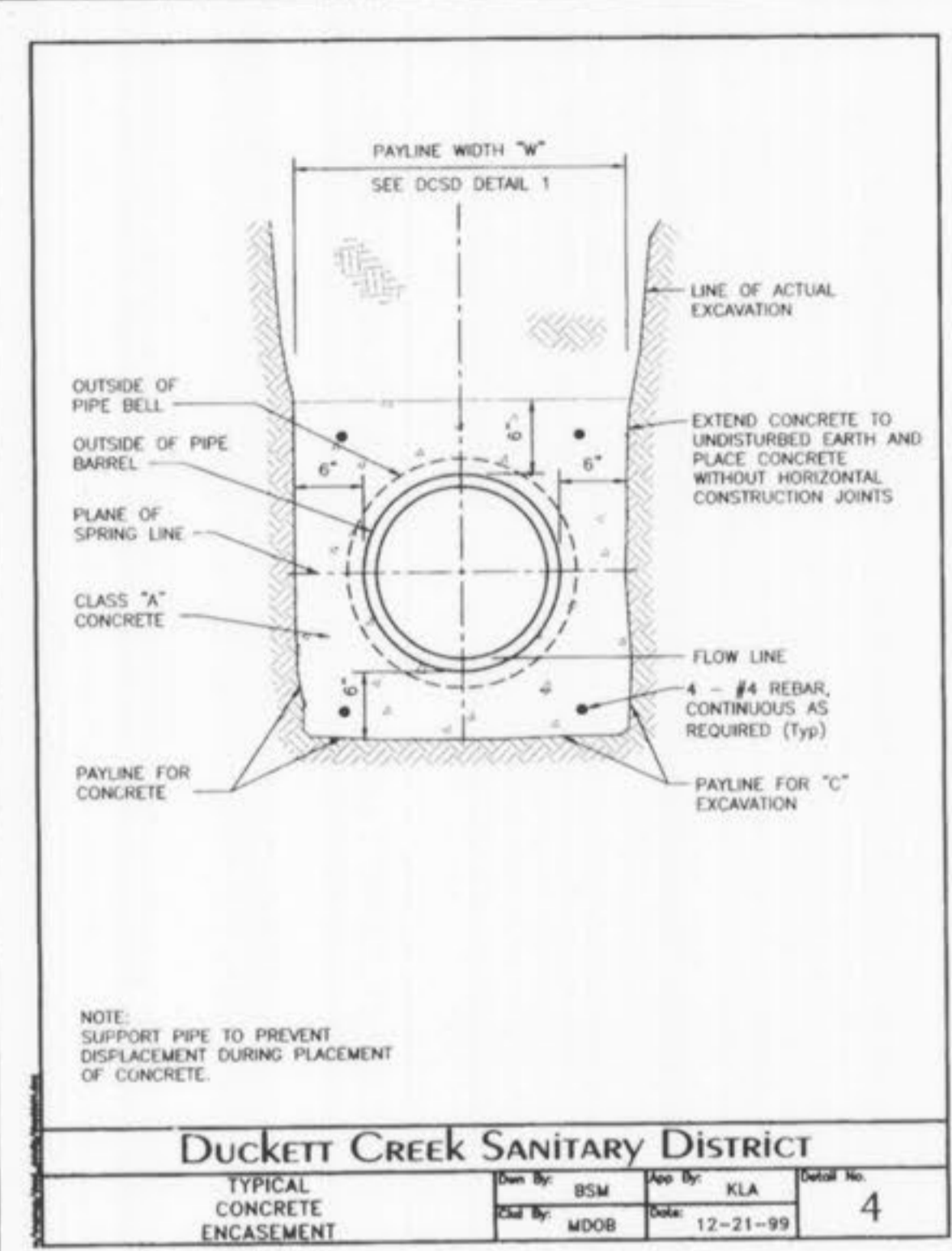
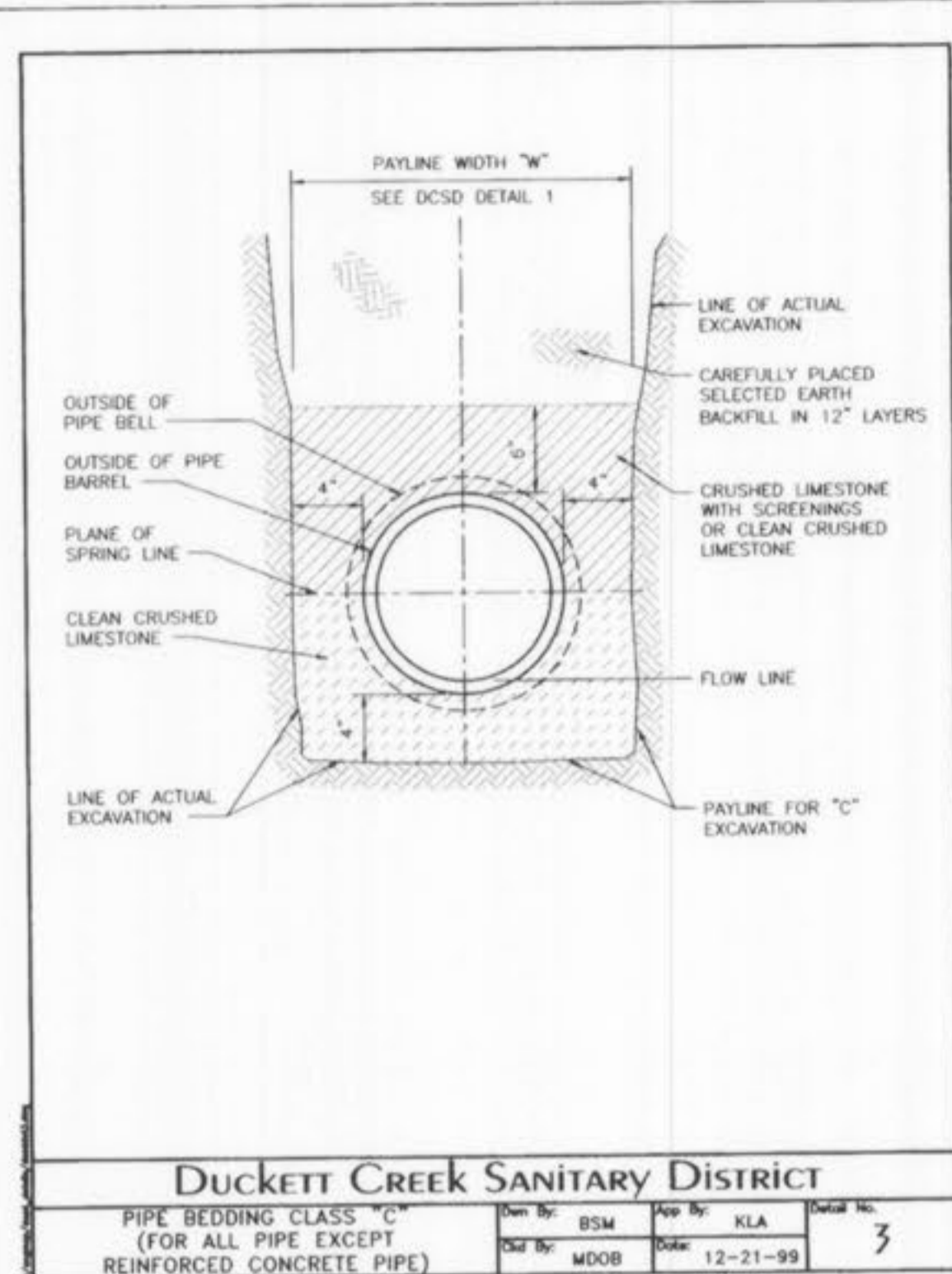
- △ 1/12/07 ASBUILT DSH
- △ 8/8/05 ASBUILT MCG
- △ REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER 6/16/05 BID PACKAGE #6
- △ 6/6/05 BUILDING PERMIT APPLICATION SET
- △ REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER

PROGRESS WEST
STORM SEWER PROFILES

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

DRAWN BY: GEORGE M. STOCK	DATE: 05.09.05	CHECKED BY: J.E.F.	DATE: 05.09.05	JOB NUMBER: 204-3224	SHEET: 12 of 16
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AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

THE EXISTING WATER MAIN (PER STAKED OUT LOCATION), EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS. SINCE THE WYE LOCATIONS HAVE BEEN PLOTTED FROM INFORMATION PROVIDED BY THE SEWER CONTRACTOR OR OTHER SOURCES, I DISCLAIM ANY RESPONSIBILITY FOR THAT SPECIFIC INFORMATION.

ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

Randall S. Rosson
RANDALL S. ROSSON, MISSOURI P.L.S. NO. 200800001
DATE: 05-09-05

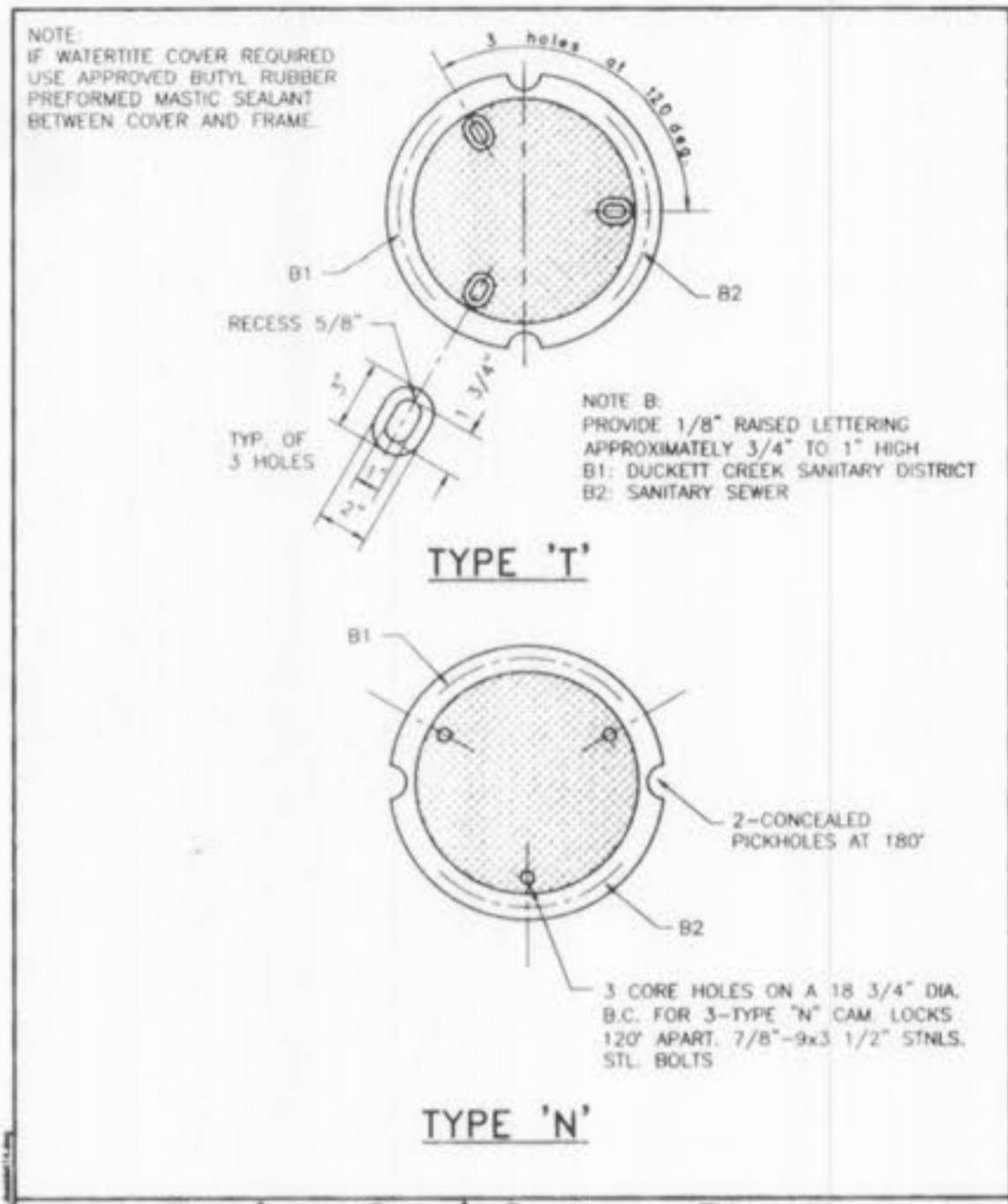
- △ 1/12/07 ASBUILT DSH
- △ 8/8/05 ASBUILT MCG
- △ REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER
- 6/16/05 BID PACKAGE #6
- 6/8/05 BUILDING PERMIT APPLICATION SET
- △ REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER

PROGRESS WEST
SANITARY CONSTRUCTION DETAILS

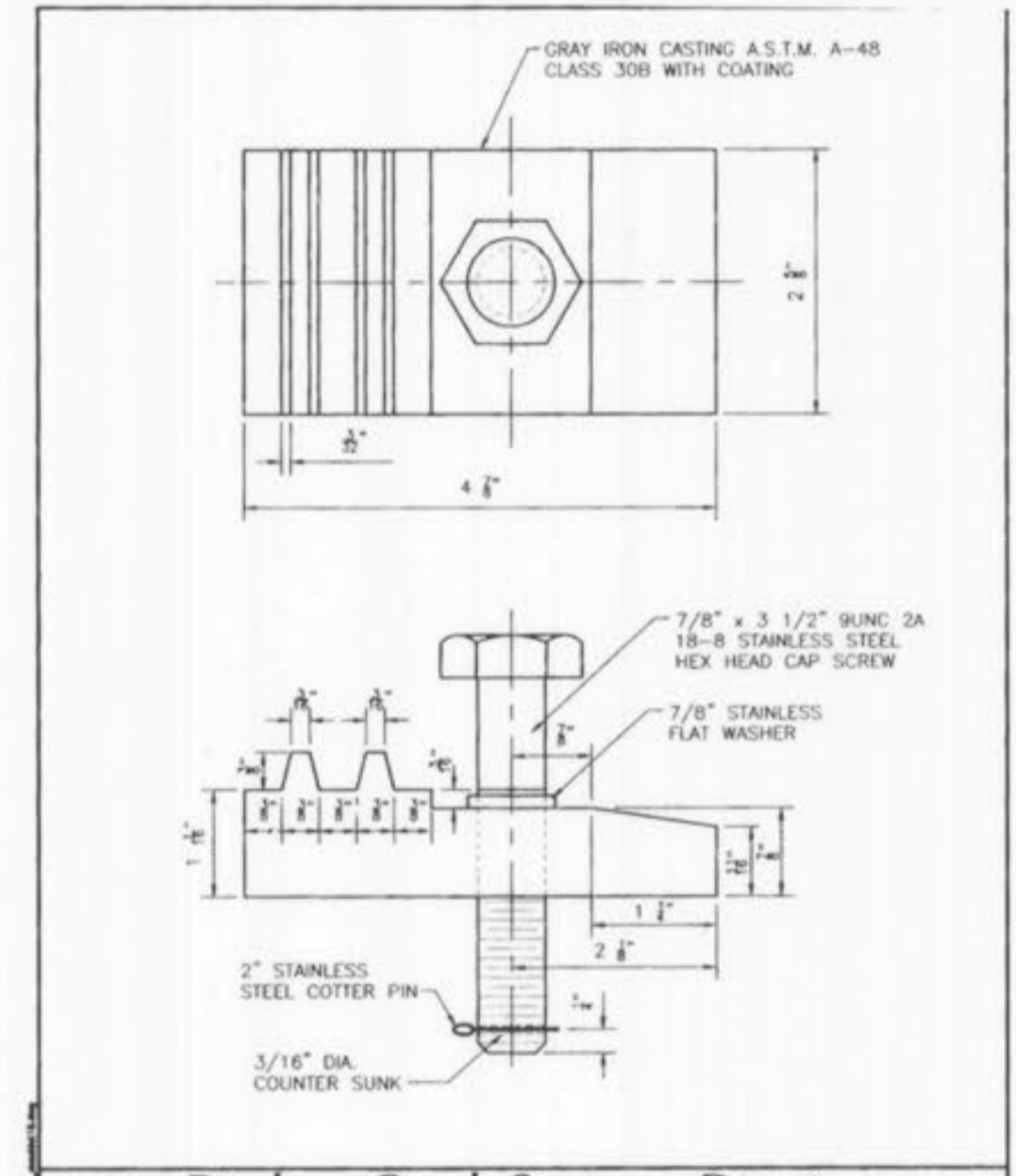
Stock & Associates
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

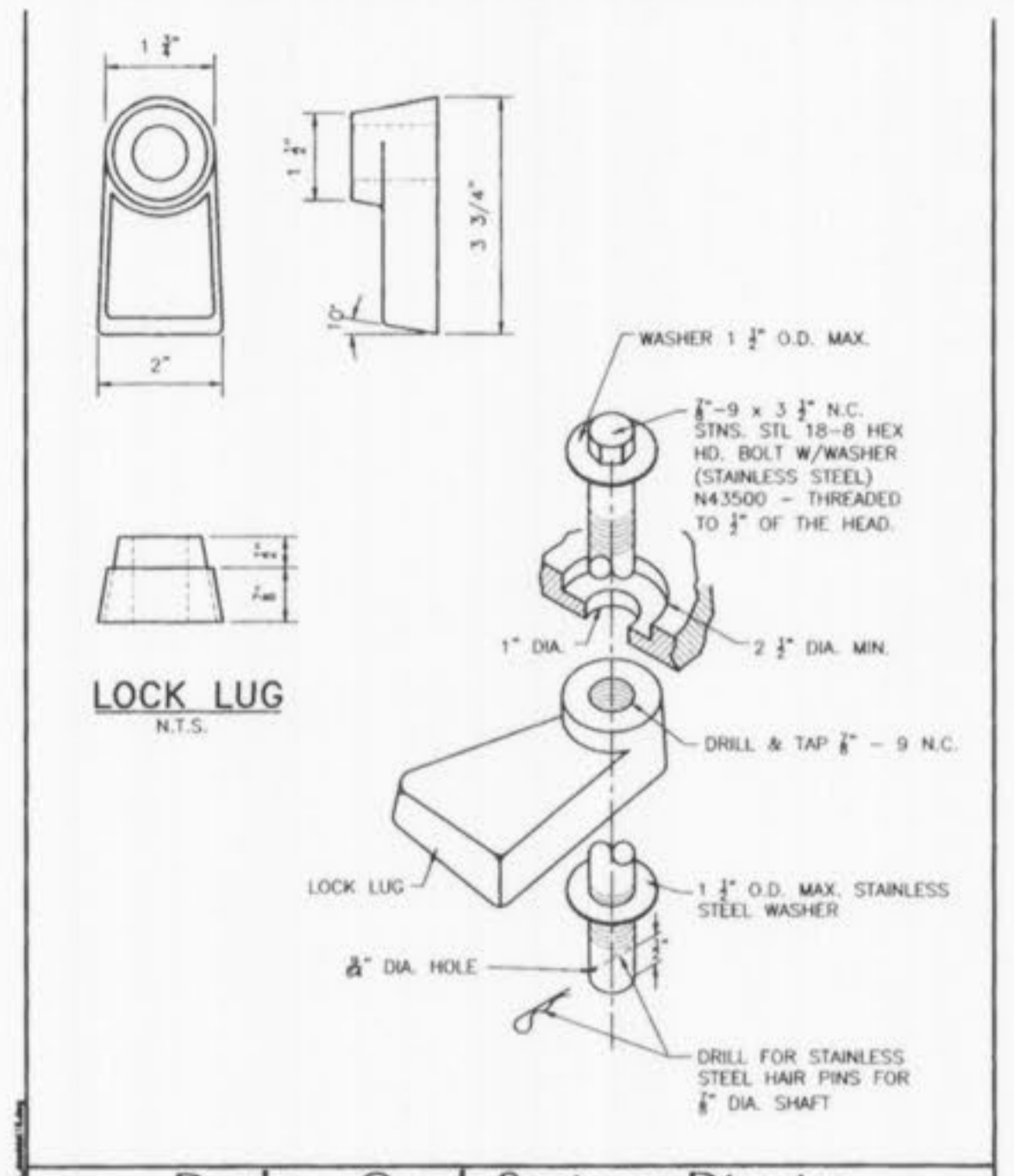
DRAWN BY: G.M.S. DATE: 05.09.05 CHECKED BY: G.M.S. DATE: 05.09.05 DATE: 05.09.05 JOB NUMBER: 204-3224 SHEET: 13 of 16



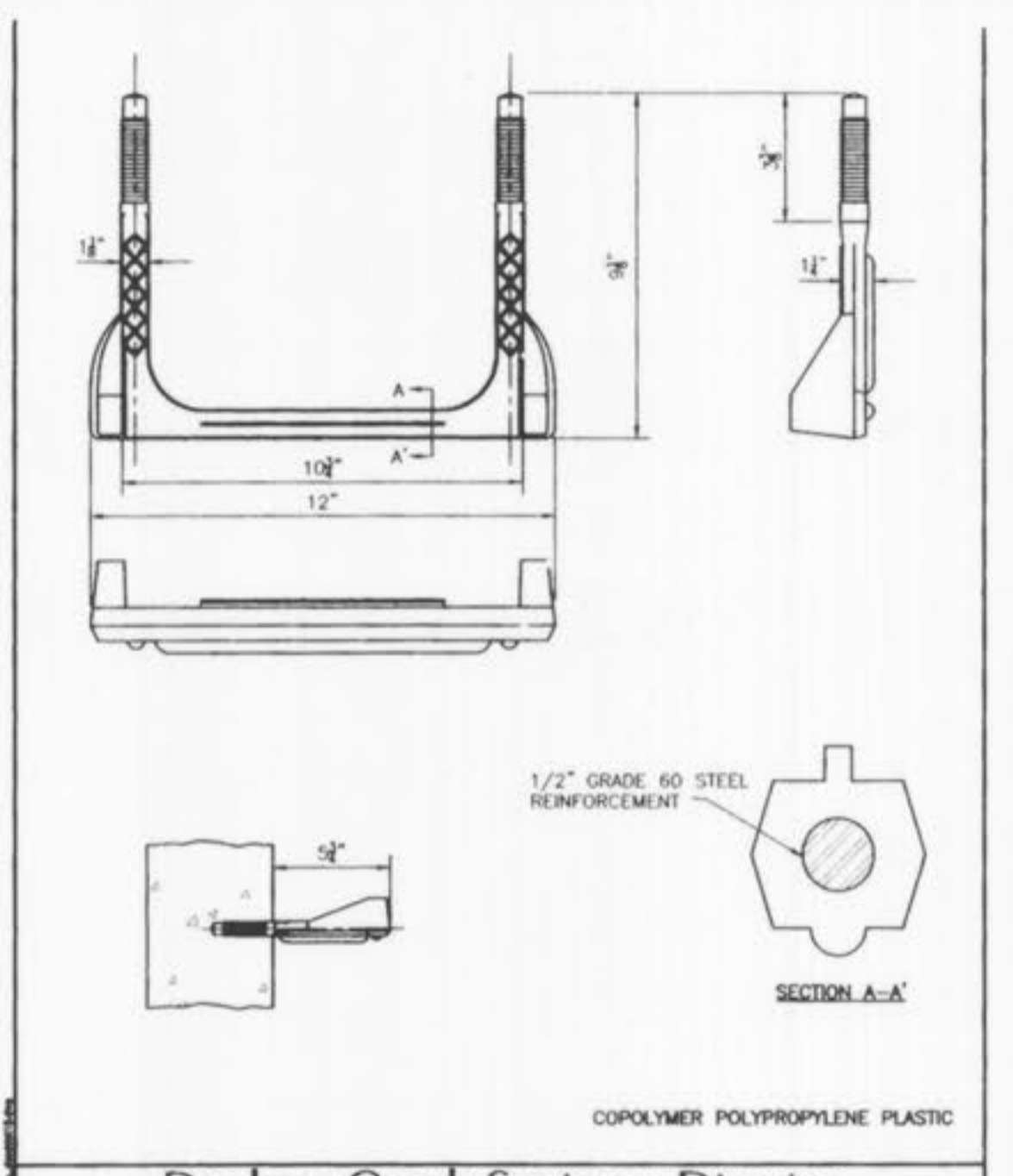
Duckett Creek Sanitary District
CAST IRON MANHOLE COVERS (LOCK TYPE)
Rev. No. BSM App. No. KLA Detail No. MDOB Date 12-27-00 14



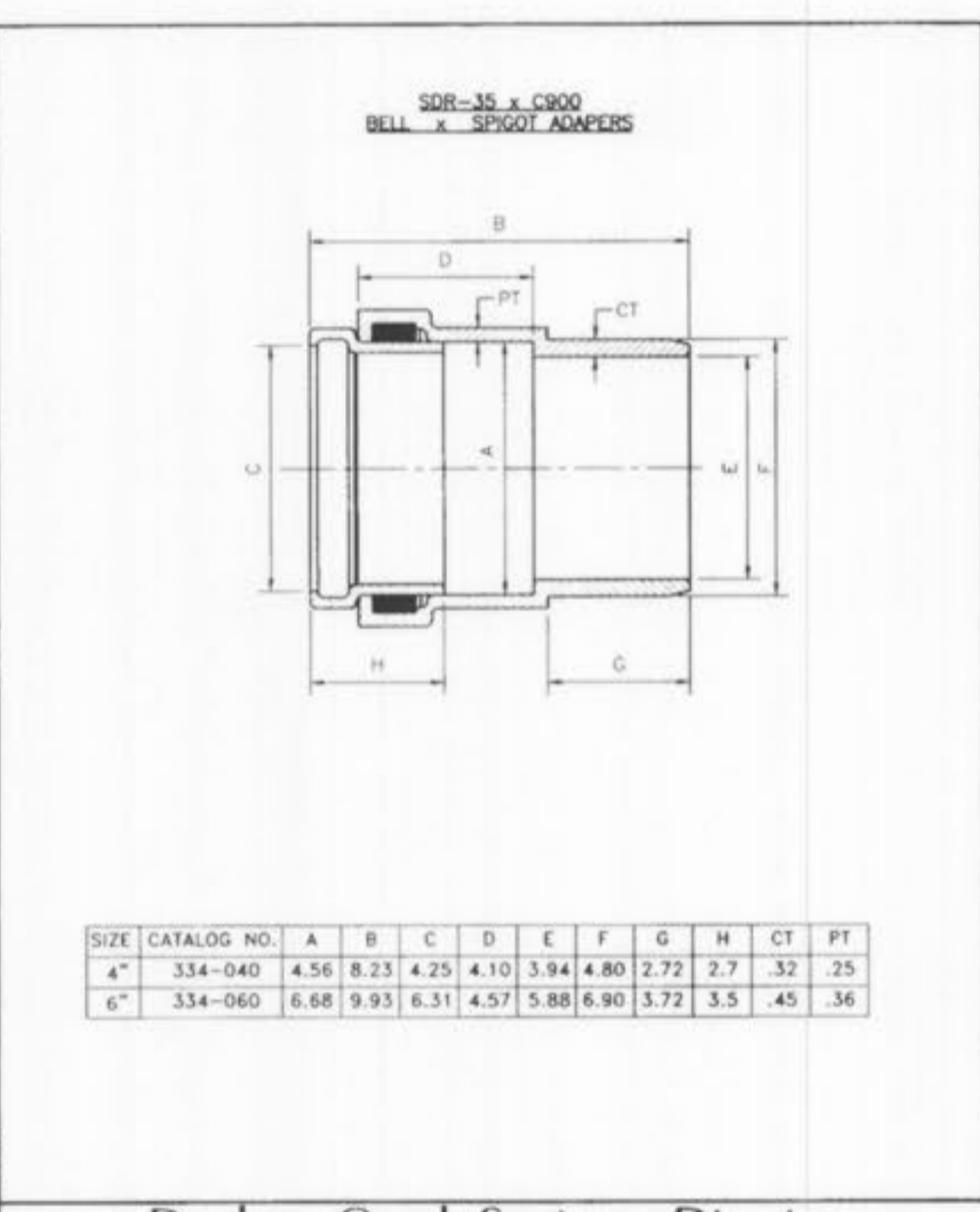
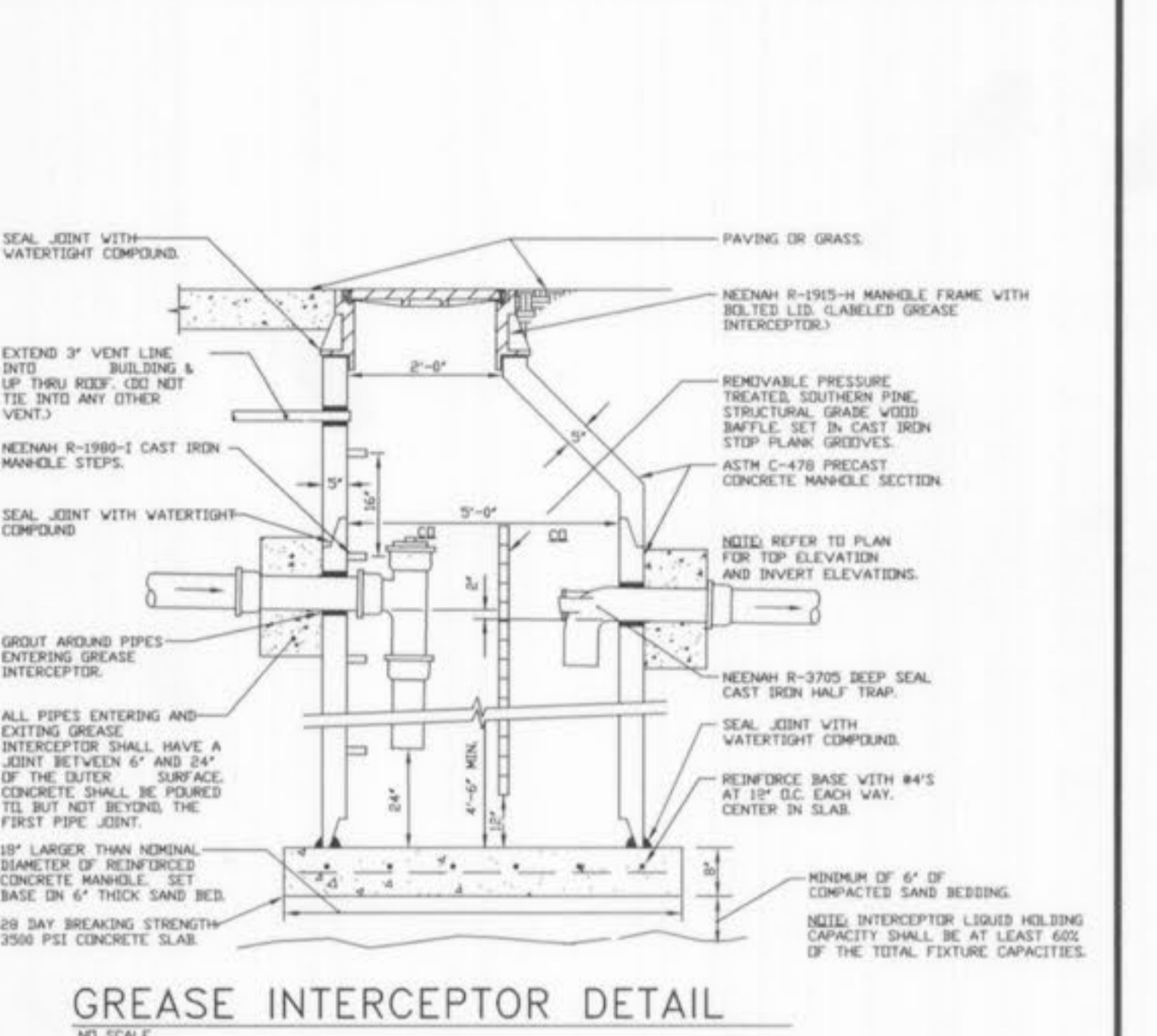
Duckett Creek Sanitary District
LOCKING DEVICE FOR TYPE "I" LOCK TYPE MANHOLE COVER
Rev. No. BSM App. No. KLA Detail No. MDOB Date 12-27-00 15



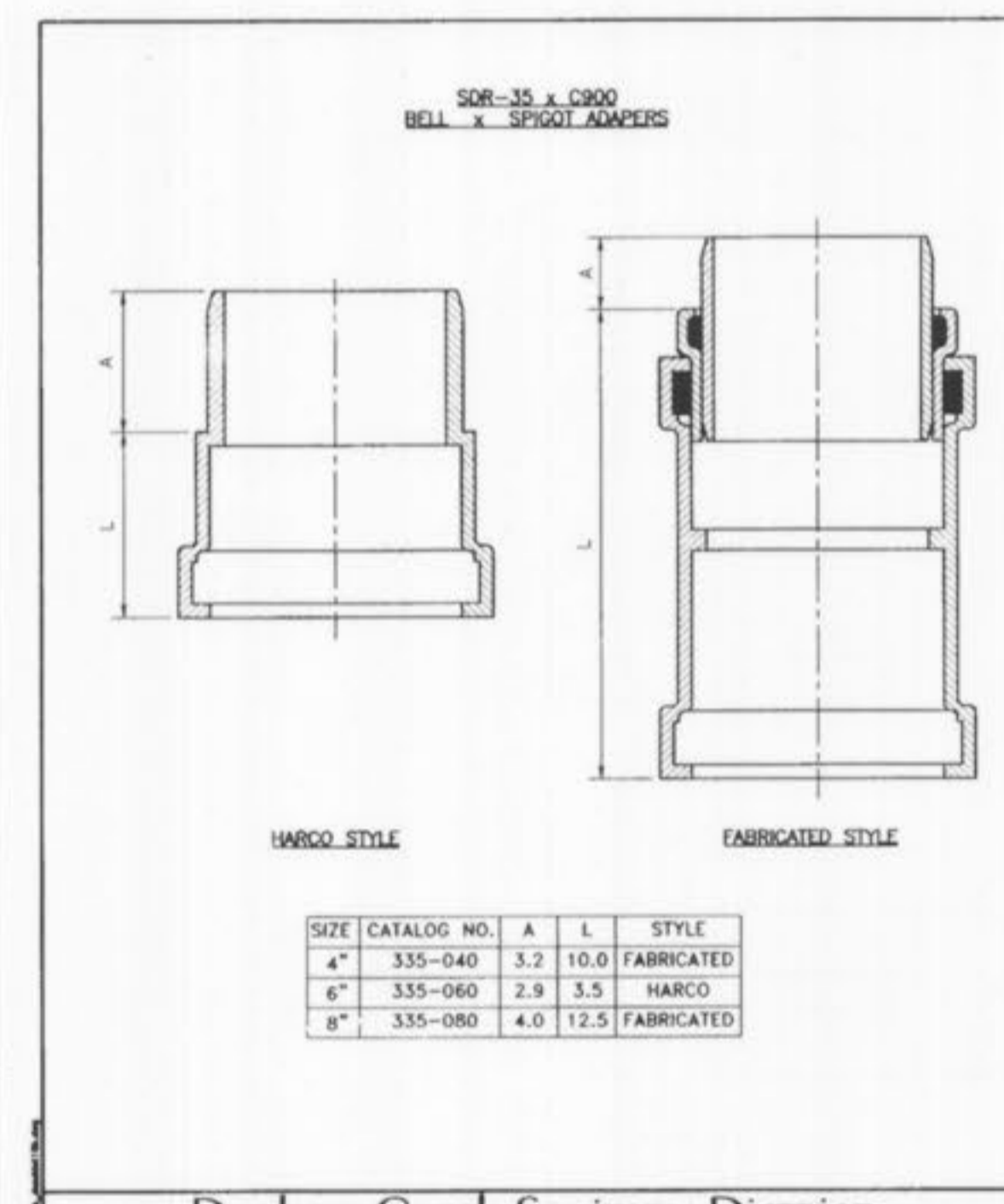
Duckett Creek Sanitary District
LOCKING DEVICE FOR TYPE "N" LOCK TYPE MANHOLE COVER
Rev. No. BSM App. No. KLA Detail No. MDOB Date 12-28-00 16



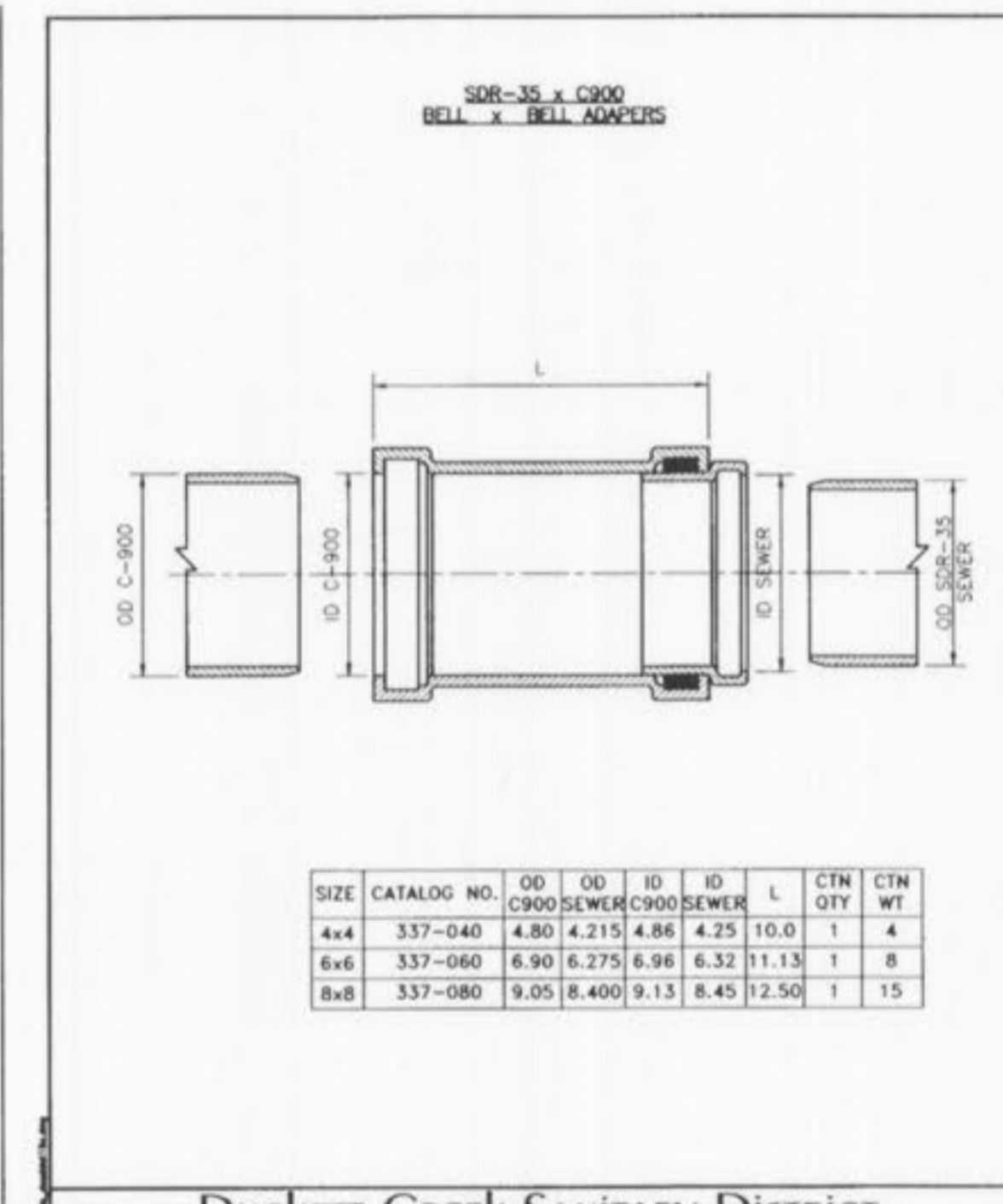
Duckett Creek Sanitary District
MANHOLE STEP PRECAST MANHOLE
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-3-01 18



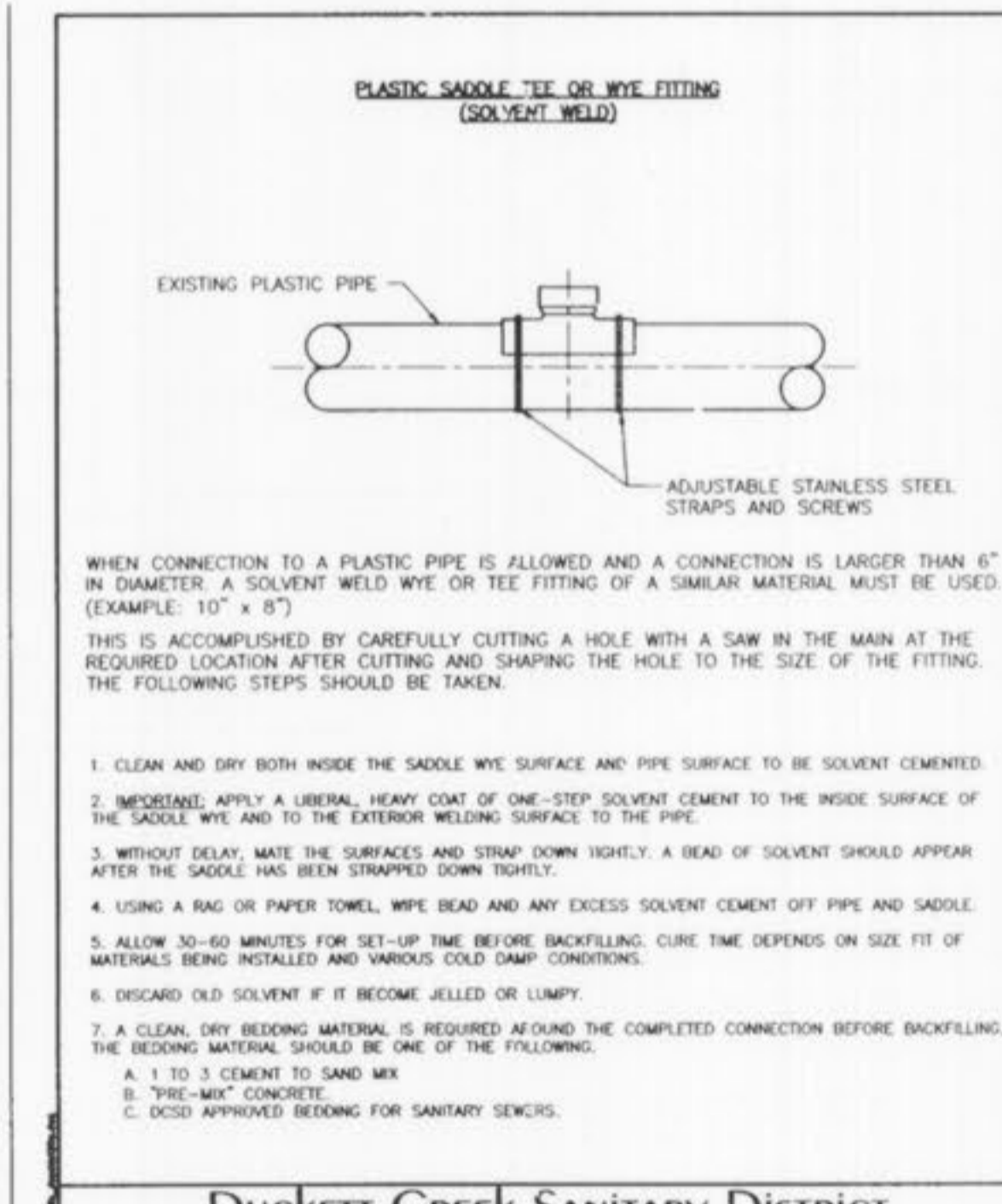
Duckett Creek Sanitary District
SDR-35 x C900 BELL AND SPIGOT ADAPTERS
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-3-01 19A



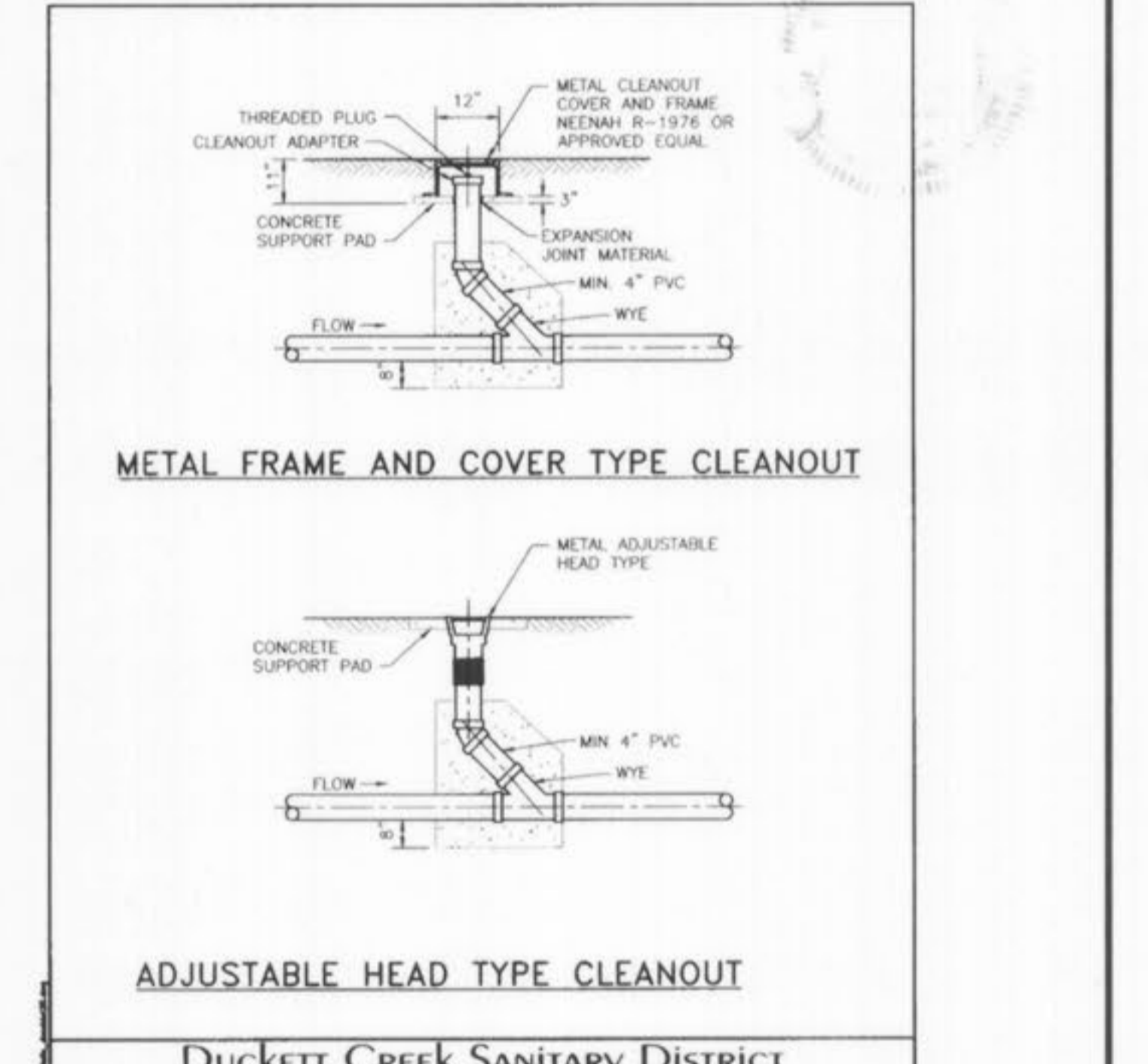
Duckett Creek Sanitary District
SDR-35 x C900 BELL AND SPIGOT SPECIAL 4", 6" & 8" ADAPTERS
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-3-01 19B



Duckett Creek Sanitary District
SDR-35 x C900 BELL AND BELL 4", 6" & 8" ADAPTERS
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-3-01 19C



Duckett Creek Sanitary District
8" & LARGER CONNECTION TO PLASTIC MAIN
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-4-01 20A



Duckett Creek Sanitary District
TYPICAL SEWER LATERAL CLEANOUT DETAILS
Rev. No. BSM App. No. KLA Detail No. MDOB Date 1-8-01 25

AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

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RANDALL S. ROSSON, MISSOURI PROFESSIONAL ENGINEER

RANDALL S. ROSSON
11207
STATE

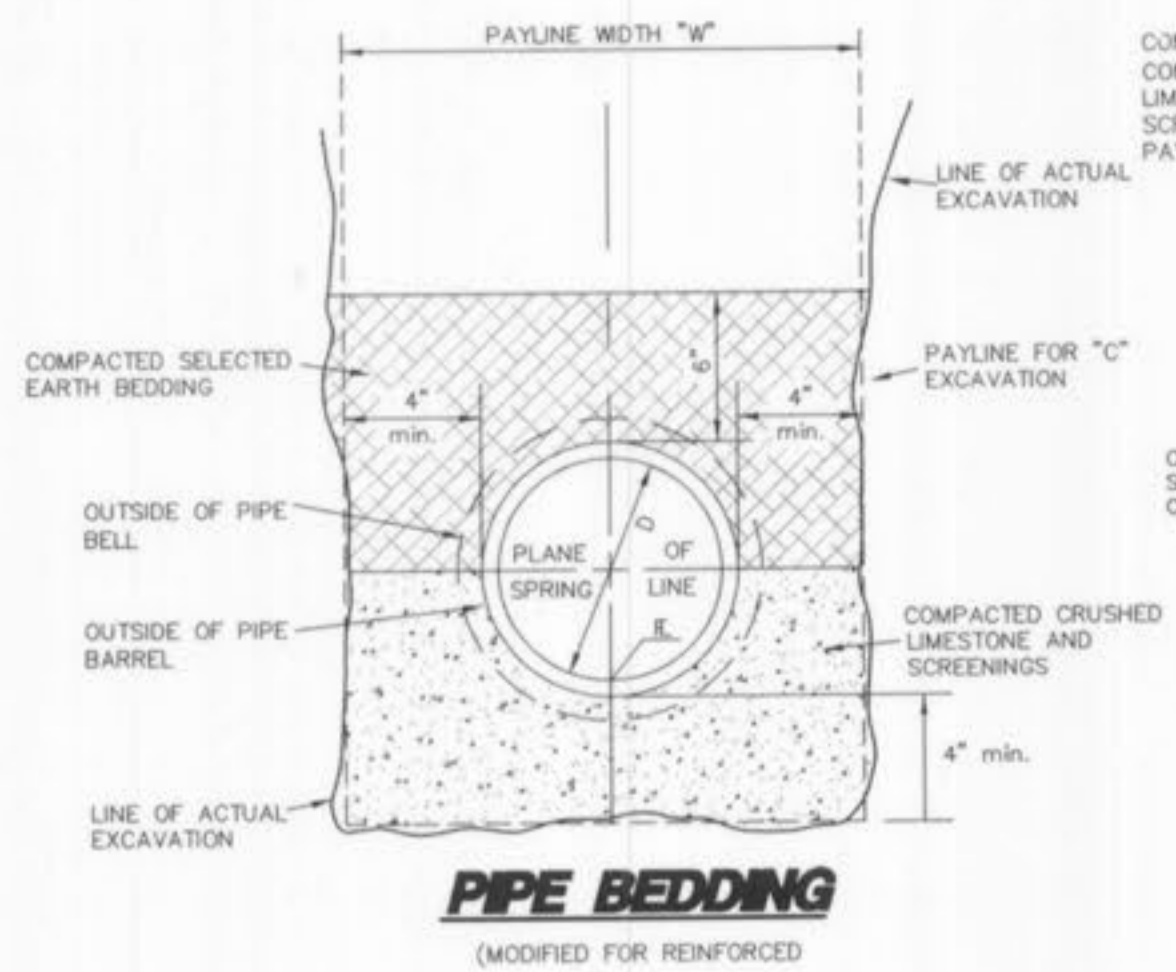
- 1/12/07 ASBUILT DSH
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- REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER 6/16/05 BID PACKAGE #6
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PROGRESS WEST
SANITARY CONSTRUCTION DETAILS

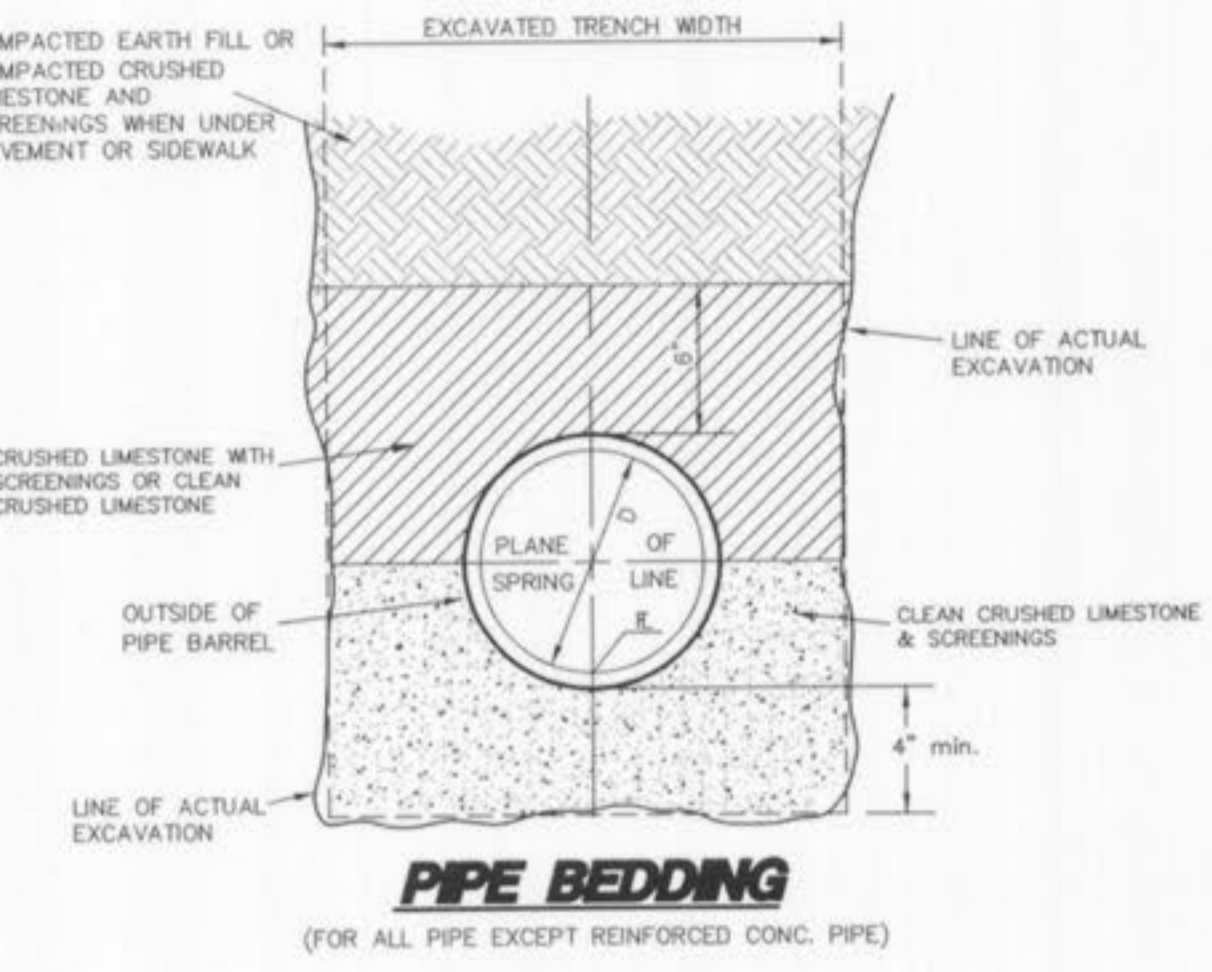
STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

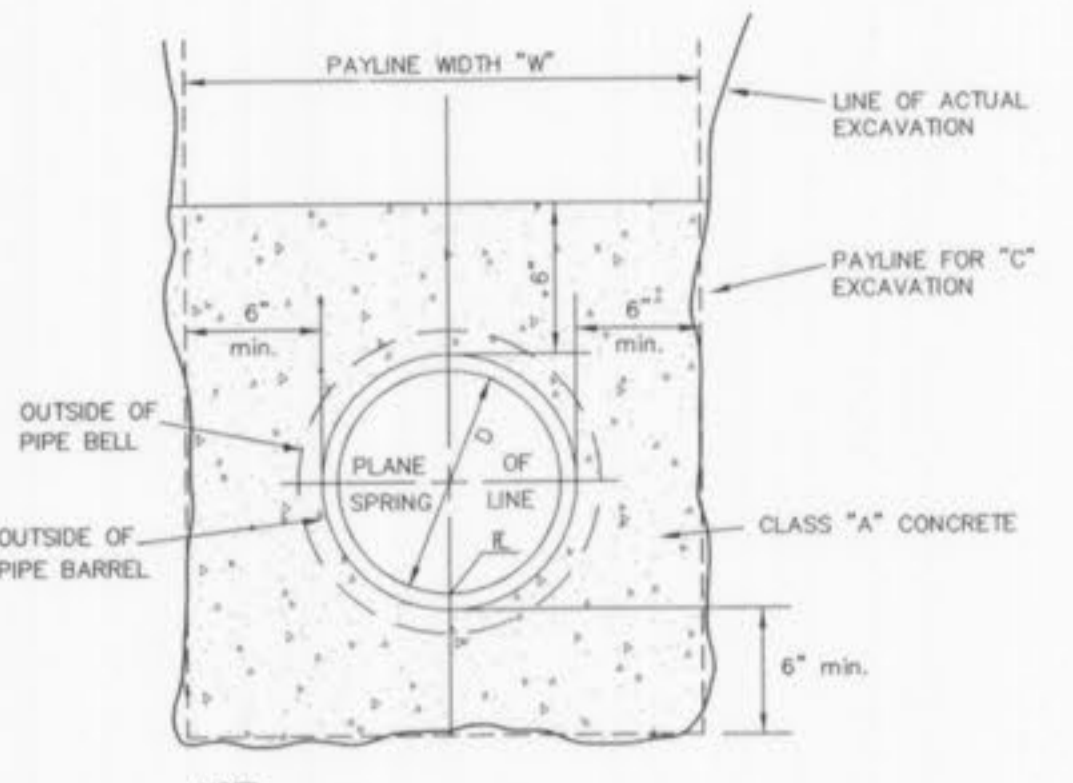
DRAWN BY: J.E.F. DATE CHECKED BY: G.M.S. DATE JOB NUMBER: 204-3224 SHEETS: 14 of 16



PIPE BEDDING
(MODIFIED FOR REINFORCED)

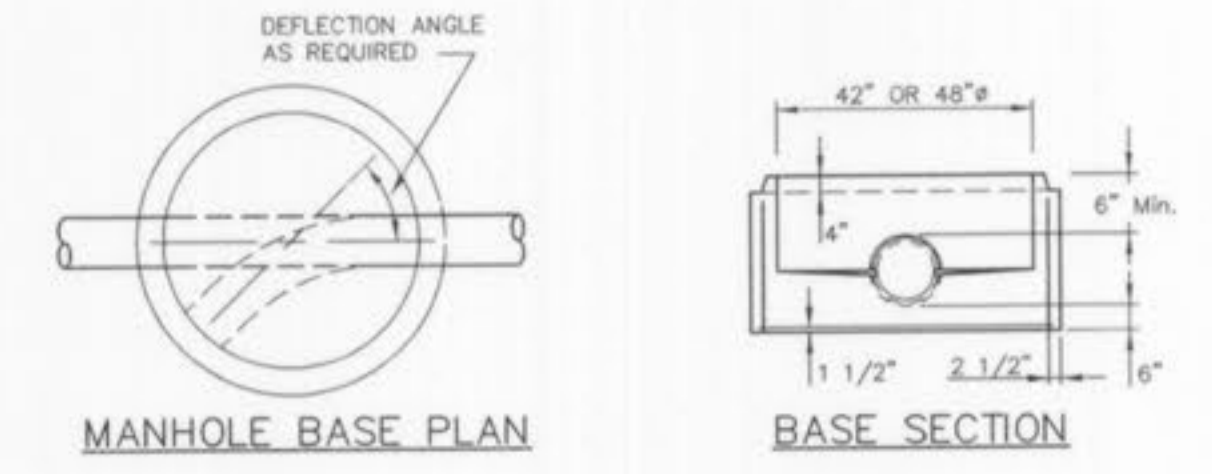


PIPE BEDDING
(FOR ALL PIPE EXCEPT REINFORCED CONC. PIPE)



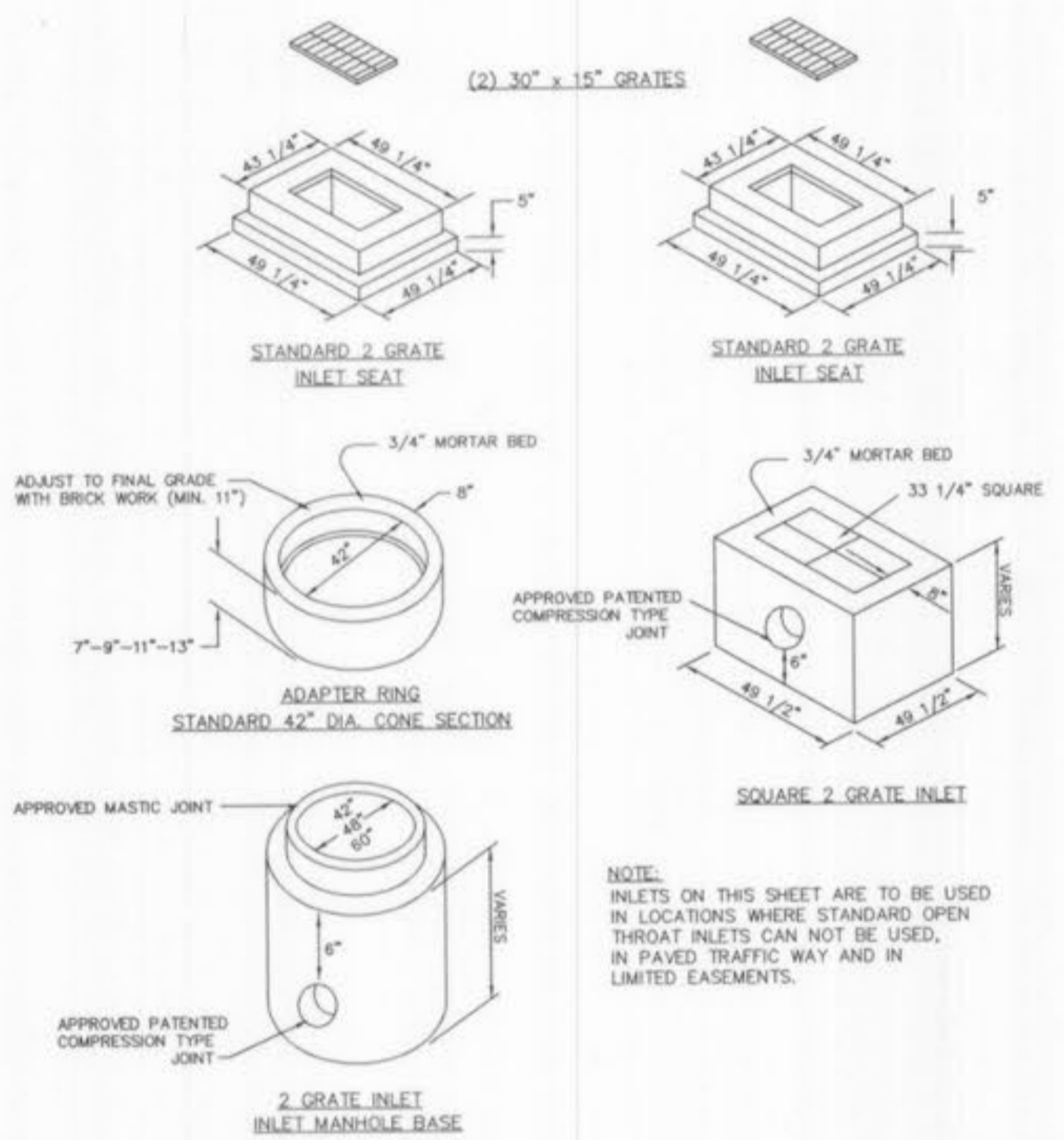
CONCRETE ENCASUREMENT DETAIL
(n.t.s.)

NOTE: SUPPORT PIPE TO PREVENT DISPLACEMENT DURING PLACEMENT OF CONCRETE.



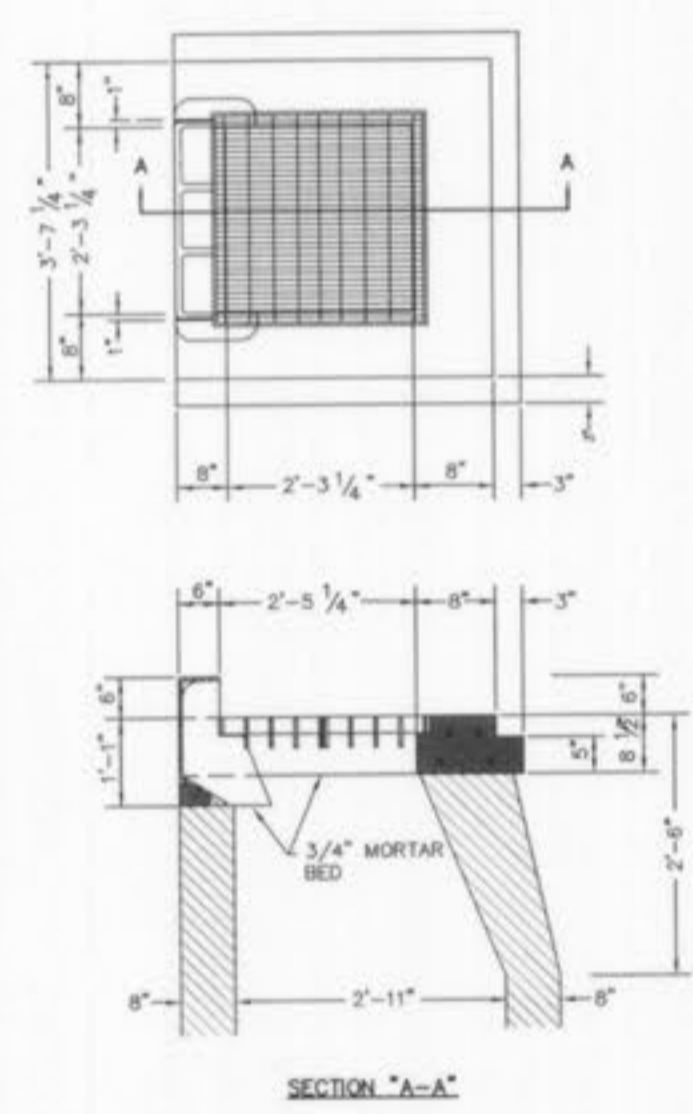
MANHOLE BASE PLAN

BASE SECTION

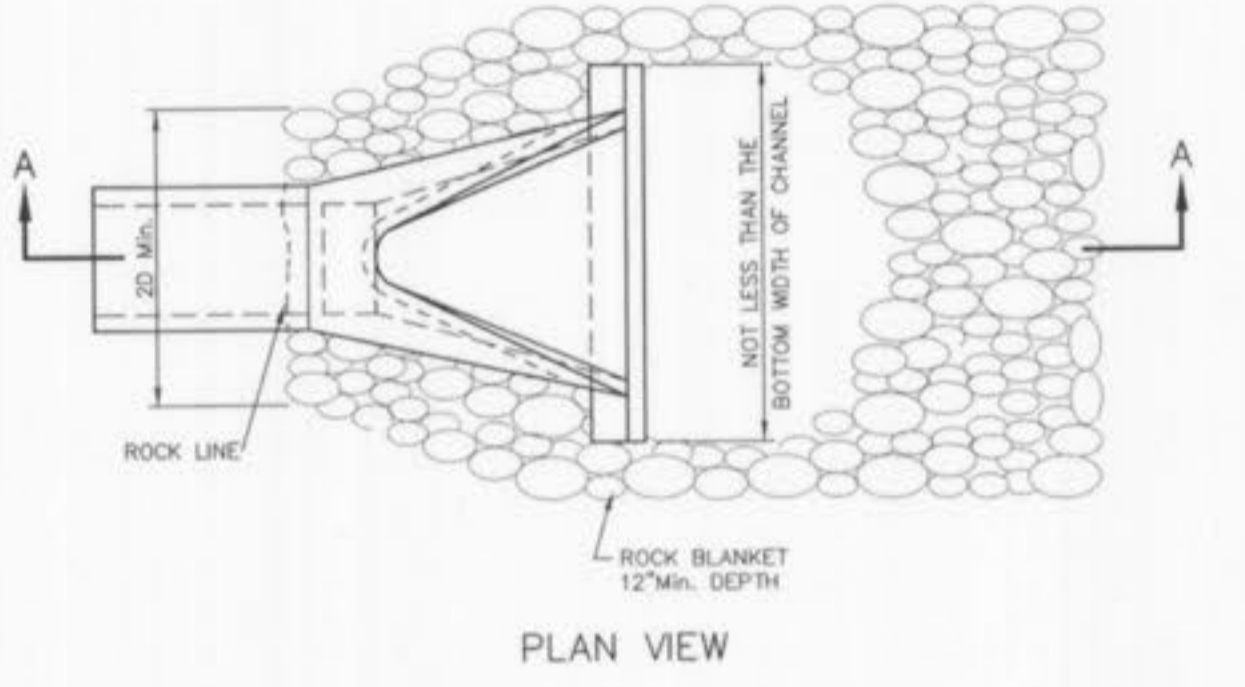


2 GRATE INLET DETAIL
(n.t.s.)

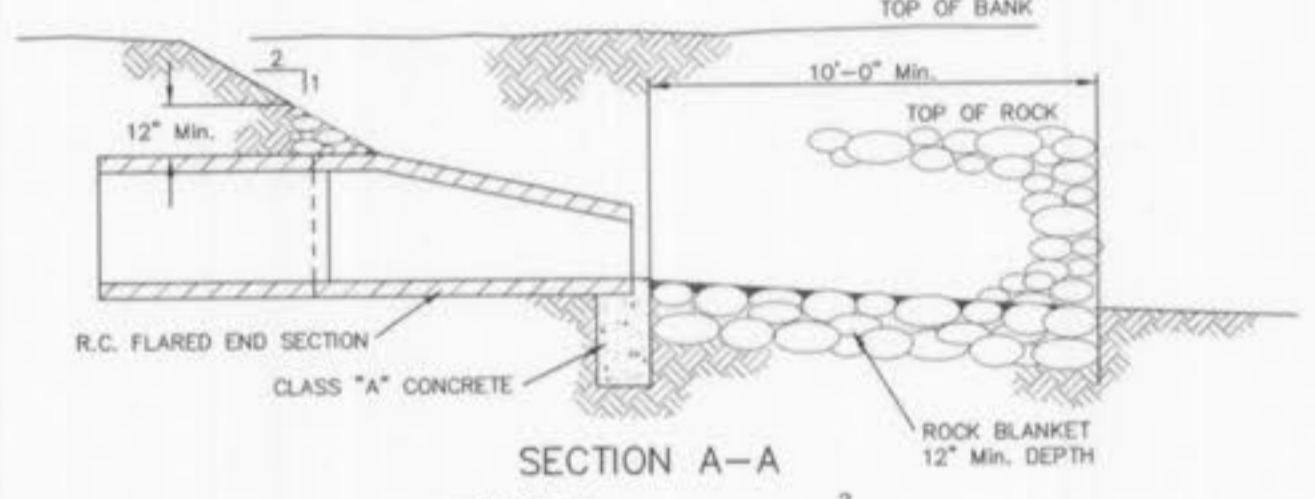
NOTE: INLETS ON THIS SHEET ARE TO BE USED IN LOCATIONS WHERE STANDARD OPEN THROAT INLETS CAN NOT BE USED, IN PAVED TRAFFIC WAY AND IN LIMITED EASEMENTS.



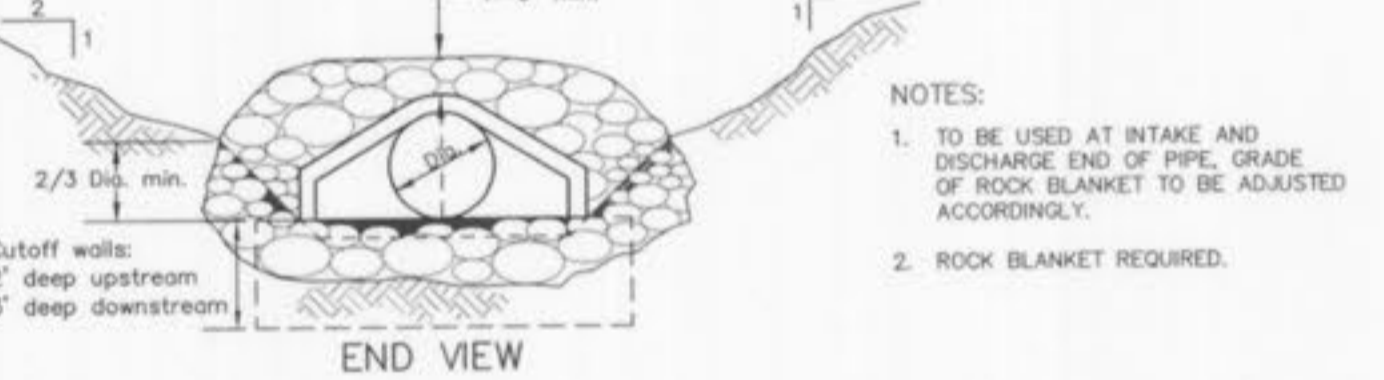
2 GRATE INLET W/SIDE INTAKE DETAIL
(n.t.s.)



PLAN VIEW

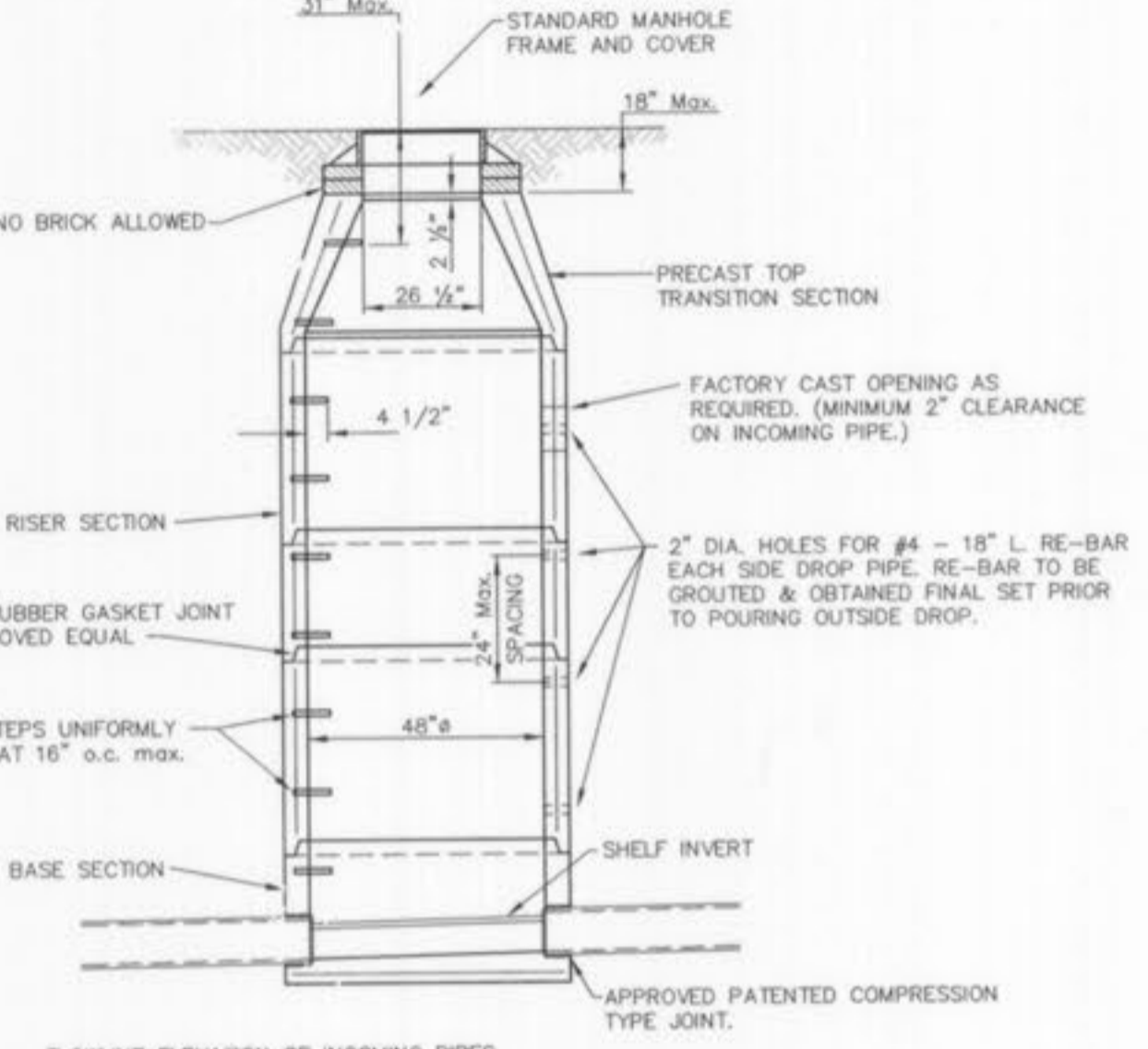


SECTION A-A



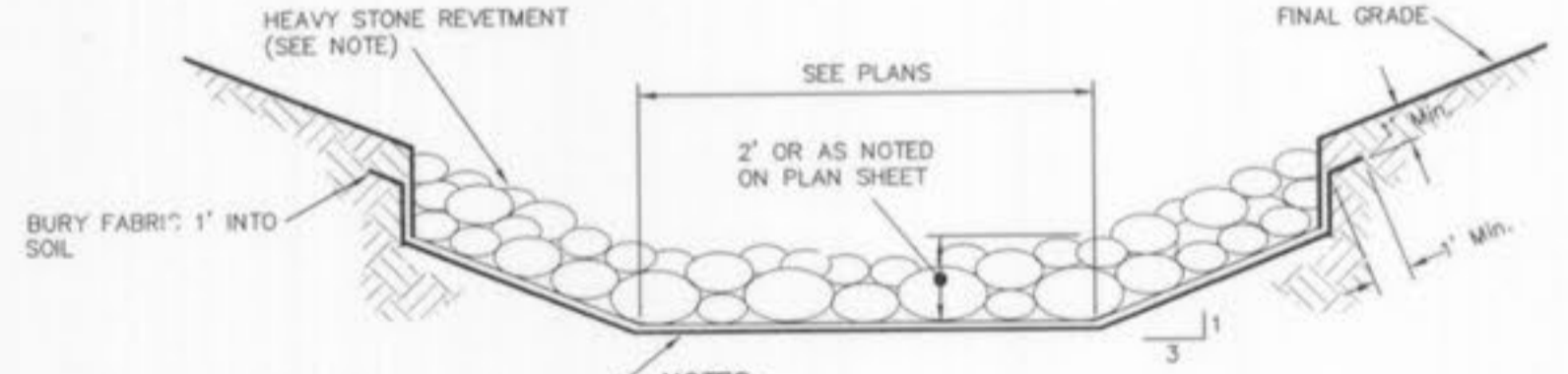
FLARED END SECTION

NOTES:
1. TO BE USED AT INTAKE AND DISCHARGE END OF PIPE, GRADE OF ROCK BLANKET TO BE ADJUSTED ACCORDINGLY.
2. ROCK BLANKET REQUIRED.



PRECAST MANHOLE

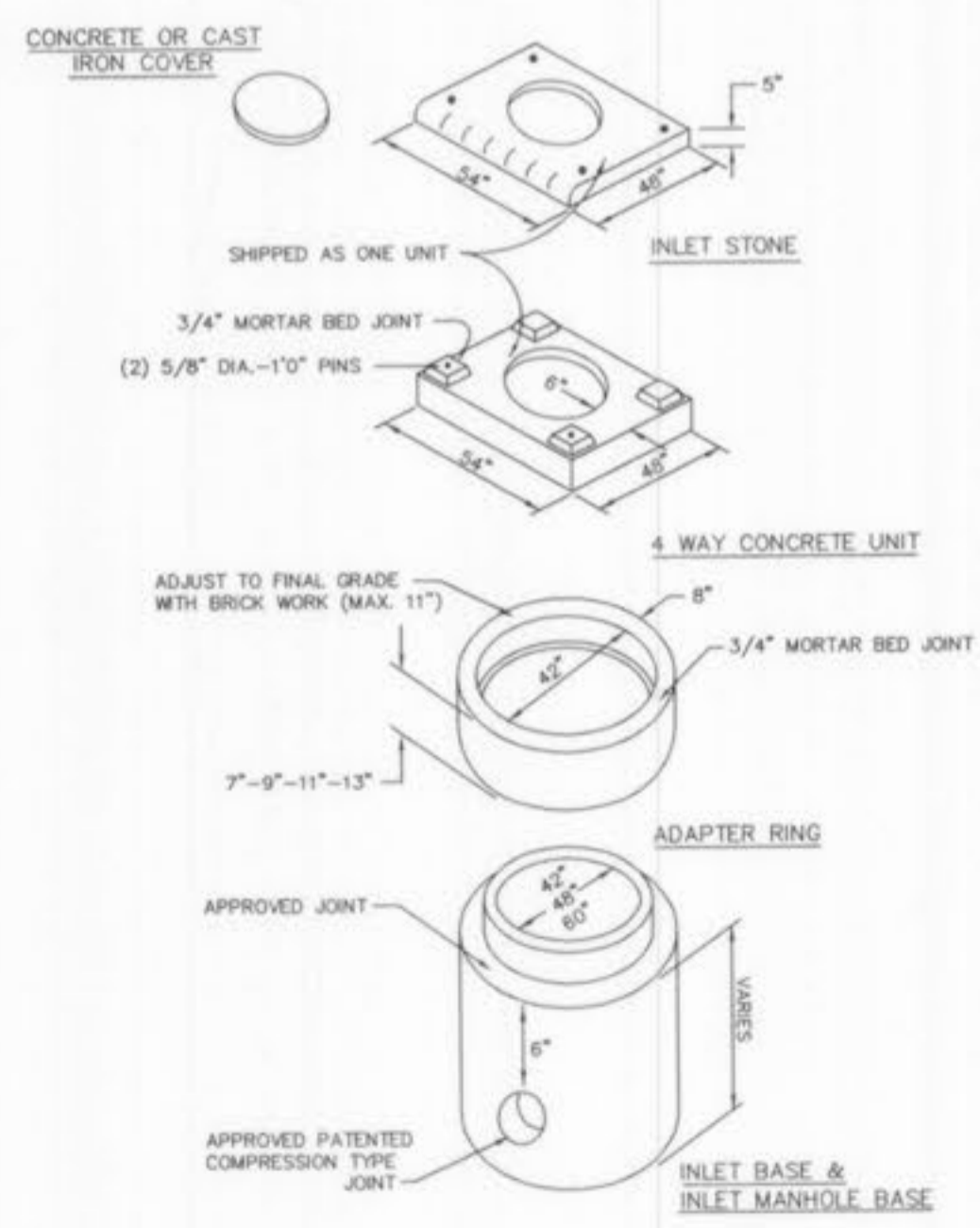
FLOWLINE ELEVATION OF INCOMING PIPES SHALL BE TWO (2) TENTHS OF A FOOT HIGHER THAN THAT OF OUTGOING PIPE.



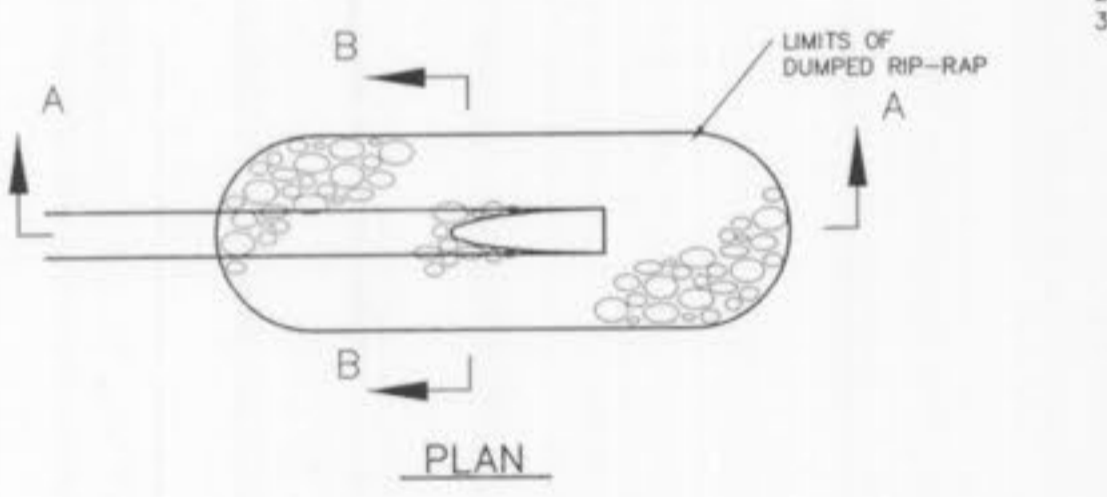
NOTES:
1. STONE FOR HEAVY STONE REVETMENT SHALL BE SOUND, DURABLE, AND FREE FROM CRACKS AND OTHER STRUCTURAL DEFECTS THAT WOULD CAUSE IT TO DETERIORATE. IT SHALL NOT CONTAIN ANY SOAPSTONE, SHALE, OR OTHER MATERIAL EASILY DISINTEGRATED. THE STONE FOR HEAVY STONE REVETMENT SHALL BE AT LEAST 12 INCH TO 18 INCH DIAMETER, dm 15 INCH.

HEAVY STONE REVETMENT DETAIL

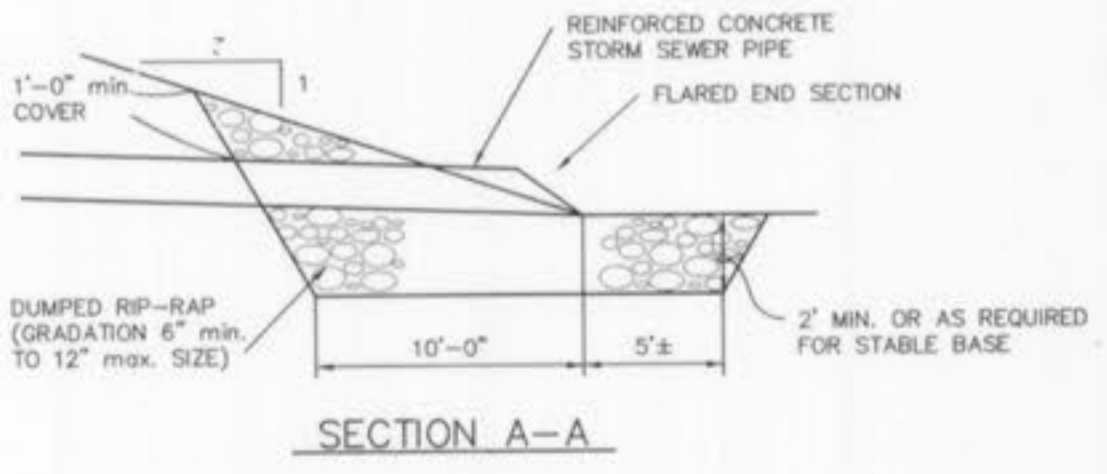
- N.T.S.
- △ 1/12/07 ASBUILT DSH
 - △ 8/8/05 ASBUILT MCG
 - △ REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER 6/16/05 BID PACKAGE #6
 - △ 6/6/05 BUILDING PERMIT APPLICATION SET
 - △ REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER



AREA INLET DETAIL
(n.t.s.)



PIPE DISCHARGE TO LAKE
(n.t.s.)

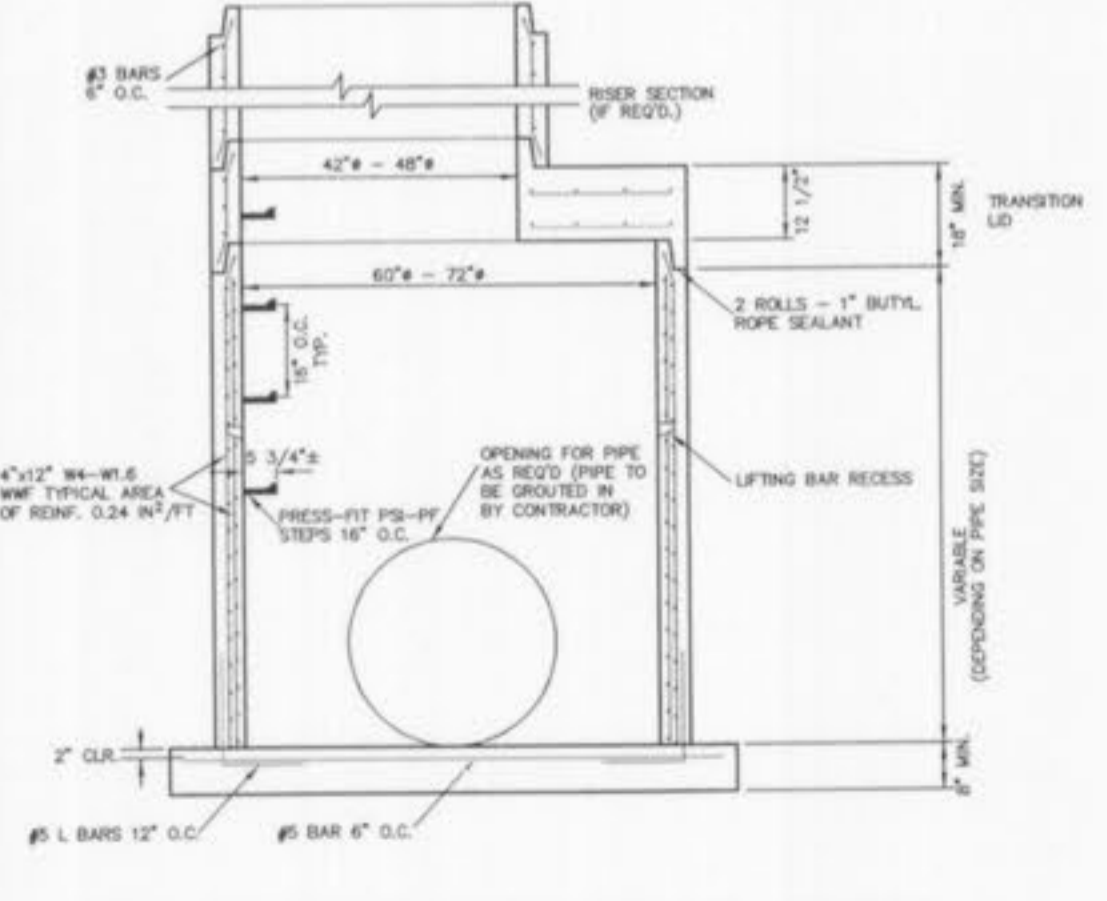


SECTION A-A



SECTION B-B

RIP-RAP DETAIL



PRECAST STRUCTURE (LARGE)

STORM STRUCTURE SHALL MEET OR EXCEED ASTM C-478 AND FOR ASTM C-273, AS MANUFACTURED BY ALUKETER BRICK CONCRETE PRODUCTS, INC. OR EQUAL.

AS-BUILT
SEWER AND WATER LINE MEASUREMENTS

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ALL PUBLIC SEWERS AND WATER MAINS ARE LOCATED AND DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS SHOWN ON THESE PLANS.



DATE: _____

PROGRESS WEST
STORM SEWER DETAILS

STOCK & ASSOCIATES
Consulting Engineers, Inc.

257 Chesterfield Business Parkway
St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

DRAWN BY:	DATE:	CHECKED BY:	DATE:	JOB NUMBER:	SHEET:
GEORGE M. STOCK	05.09.05	G.M.S.	05.09.05	204-3224	C15 of 16

HYDRAULIC CALCULATION SHEET (SEE DRAINAGE AREA MAP SHEETS FOR P.L. AND Q (inflow) FOR EACH STRUCTURE)															Date Revised									
Project name: Progress West										Calculated By: J.E.F.		1 - Nov. 17, 2004		4 - April 14, 2005										
Project number: 204-3224										Checked By: G.M.S.		2 - Feb. 01, 2005		As-Built - Jan. 12, 2007										
Project Location: O'Fallon, MO										Date: Oct. 20, 2004		3 - March 02, 2005												
										Bend Coefficients:														
										5° = 0.06		20° = 0.24		35° = 0.4		50° = 0.50		65° = 0.57		80° = 0.65				
										10° = 0.11		25° = 0.30		40° = 0.43		55° = 0.52		70° = 0.60		85° = 0.67				
										15° = 0.18		30° = 0.35		45° = 0.47		60° = 0.55		75° = 0.62		90° = 0.70				
LINE	FLOW LINE		ELEVATIONS		Length	Flowline	Pipe Size	Full Flow	Total Q	Mean Full Flow	Velocity	QV ₅₀	Pipe Coef.	H	Junction	Bend	Total	Upper F.L.	Lower F.L.	Lower F.L.	Structure	TOP	Free	
Number	Upper	Lower	Upper	Lower	(ft)	Grade (ft/ft)	(in.)	Cap. (cfs)	(cfs)	Vel. (ft/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	Loss	+ Dia.	+H	+H	Upper	Structure	Board	Structure	
71	71	70	542.62	540.60	14.43	0.1400	15	24.23	2.52	2.05	0	0.07	0.17	0.013	0.02	0.00	0.00	543.87	541.87	541.85	543.87	545.53	1.66	71
HYDRAULIC FLOW LINE =																								
69A	69A	69	562.21	560.26	65.94	0.0296	15	11.14	0.54	0.44	0	0.00	0.00	0.013	0.00	0.00	0.00	563.46	561.51	561.51	563.46	565.71	2.25	69A
69	69	68	560.06	558.82	146.32	0.0358	15	12.26	1.34	1.09	0	0.02	0.02	0.013	0.06	0.00	0.00	561.31	556.13	556.07	561.31	563.86	2.55	69
68	68	57	554.62	550.74	76.67	0.0906	15	14.57	4.90	3.99	0	0.25	1.21	0.013	0.44	0.00	0.00	555.87	552.43	551.99	555.87	560.48	4.61	68
HYDRAULIC FLOW LINE =																								
67	67	66	558.52	556.89	56.02	0.0291	15	11.05	0.49	0.40	0	0.00	0.00	0.013	0.00	0.00	0.00	559.77	558.14	558.14	559.77	562.07	2.30	67
66	66	56	556.69	550.30	37.17	0.1719	15	26.86	1.03	0.84	0	0.01	0.01	0.013	0.01	0.00	0.00	557.94	553.53	553.52	557.94	561.54	3.60	66
HYDRAULIC FLOW LINE =																								
65	65	62	559.69	559.03	36.08	0.0183	15	8.76	0.28	0.23	0	0.00	0.00	0.013	0.00	0.00	0.00	560.94	560.28	560.28	560.94	563.39	2.45	65
HYDRAULIC FLOW LINE =																								
64	64	63	567.23	567.09	36.60	0.0038	15	4.01	0.26	0.21	0	0.00	0.00	0.013	0.00	0.00	0.00	568.48	568.34	568.34	568.48	570.70	2.22	64
63	63	62	564.30	559.03	166.87	0.0316	15	11.51	0.47	0.38	0	0.00	0.00	0.013	0.01	0.00	0.00	565.55	560.29	560.28	565.55	570.64	5.09	63
62	62	61	558.83	556.98	107.04	0.0175	15	8.32	0.99	0.81	0	0.01	0.01	0.013	0.03	0.00	0.00	560.08	558.26	558.23	560.08	563.39	3.31	62
61	61	55	556.78	554.02	21.05	0.1311	15	23.45	1.30	1.06	0	0.02	0.02	0.013	0.01	0.00	0.00	558.03	555.28	555.27	558.03	560.66	2.63	61
HYDRAULIC FLOW LINE =																								
EX60	EX60	59	561.44	560.47	73.88	0.0131	36	76.63	41.43	5.86	0	0.53	22.10	0.013	0.29	0.00	0.00	564.44	563.76	563.47	564.44	576.25	11.81	EX60
59	59	58	560.27	552.51	280.85	0.0258	36	109.43	42.05	5.95	0	0.53	23.07	0.013	1.15	0.00	0.00	563.27	556.66	555.51	563.27	569.41	6.14	59
58	58	57	552.31	550.84	125.24	0.0117	36	72.46	35.99	6.28	0	0.63	28.49	0.013	0.57	0.00	0.00	555.31	554.41	553.84	555.31	558.09	3.38	58
57	57	56	550.64	550.40	31.76	0.0076	36	38.14	39.99	7.07	0	0.78	38.82	0.013	0.73	0.00	0.00	551.65	551.37	551.37	551.65	555.29	3.63	57
56	56	55	550.20	548.85	127.17	0.0106	36	68.91	51.31	7.26	0	0.82	41.98	0.013	0.73	0.00	0.00	553.64	553.58	553.40	553.64	561.59	7.95	56
55	55	54	548.65	547.28	171.91	0.0080	36	99.70	52.98	7.50	0	0.87	46.22	0.013	1.09	0.00	0.00	551.65	551.65	551.85	551.65	561.90	8.30	55
54	54	53	547.08	544.45	266.82	0.0099	36	66.40	57.96	8.29	0	1.04	60.51	0.013	2.02	0.00	0.00	550.08	549.77	550.28	551.65	560.57	8.92	54
53	53	52	544.25	542.18	176.93	0.0117	42	109.12	67.34	7.00	0	0.76	51.22	0.013	0.79	0.00	0.00	549.77	546.47	545.68	549.77	555.29	7.47	53
52	52	51	541.98	539.77	103.26	0.0182	42	346.90	75.73	7.87	0	0.96	72.86	0.013	0.59	0.00	0.00	545.48	533.87	533.29	545.48	549.96	4.48	52
51	51	50	529.77	528.08	50.26	0.0336	42	184.99	75.73	7.87	0	0.96	72.86	0.013	0.29	0.00	0.00	533.27	533.29	533.00	533.27	543.97	10.68	51
HYDRAULIC FLOW LINE = NORMAL POOL ELEVATION																								
45	45	44	538.98	537.98	93.63	0.0107	15	6.69	0.83	0.68	0	0.01	0.01	0.013	0.02	0.00	0.00	540.23	539.25	539.23	540.23	542.18	1.95	45
44	44	43	537.76	535.54	291.35	0.0077	15	5.68	3.96	3.23	0	0.16	0.64	0.013	1.09	0.00	0.00	539.03	537.03	536.84	539.03	542.23	3.20	44
43	43	42	535.34	534.45	22.73	0.0392	18	20.84	6.65	3.76	0	0.22	1.46	0.013	0.09	0.00	0.00	536.84	536.04	535.95	536.84	547.09	10.25	43
42	42	41	534.25	529.74	151.27	0.0298	18	18.19	6.86	3.58	0	0.23	1.61	0.013	0.64	0.00	0.00	535.75	535.30	534.65	535.75	546.90	11.15	42
41	41	40	529.54	529.06	60.37	0.0080	18	9.39	8.59	4.86	0	0.37	3.15	0.013	0.40	0.00	0.00	531.04	534.65	534.25	534.65	541.69	10.04	41
HYDRAULIC FLOW LINE =																								
38	38	37	569.82	567.94	192.34	0.0100	15	6.48	3.40	2.84	0	0.13	0.44	0.013	0.56	0.00	0.00	571.07	569.75	569.19	571.07	572.09	1.02	38
37	37	12	567.74	559.82	205.81	0.0385	15	12.71	3.40	2.84	0	0.13	0.44	0.013	0.60	0.00	0.00	568.99	562.62	562.02	568.99	575.11	6.12	37
HYDRAULIC FLOW LINE =																								
36	36	28	554.83	554.20	62.66	0.0101	15	6.49	3.99	3.25	0	0.16	0.65	0.013	0.24	0.00	0.00	556.08	555.96	555.72	556.08	558.53	2.45	36
HYDRAULIC FLOW LINE =																								
35	35	34	538.71	534.64	130.99	0.0311	15	11.42	0.42	0.34	0	0.00	0.00	0.013	0.01	0.00	0.00	559.96	555.90	555.89	559.96	562.69	2.73	35
34	34	32	534.44	532.77	146.65	0.0114	15	6.91	1.27	1.03	0	0.02	0.02	0.013	0.06	0.00	0.00	555.69	554.08	554.02	555.69	558.16	2.47	34
32	32	24	532.57	532.06	83.28	0.0061	15	5.07	3.00	2.44	0	0.09	0.28	0.013	0.18	0.00	0.00	553.82	553.49	553.31	553.82	555.79	1.97	32
HYDRAULIC FLOW LINE =																								
31	31	23	559.49	554.28	203.08	0.0257	15	10.37	1.00	0.81	0	0.01	0.01	0.013	0.05	0.00	0.00	560.74	555.58	555.53	560.74	562.77	2.03	31
HYDRAULIC FLOW LINE =																								
30	30	29	562.95	561.80	36.19	0.0318	15	11.55	0.59	0.48	0	0.00	0.00	0.013	0.00	0.00	0.00	564.20	563.05	563.05	564.20	566.35	2.15	30
29	29	28	561.60	554.20	118.49	0.0625	15	16.19	0.96	0.78	0	0.01	0.01	0.013	0.03	0.00	0.00	562.85	555.84	555.81	562.85	566.36	3.51	29
28	28	27	554.20	553.99	65.49	0.0032	18	5.96	6.80	3.85	0	0.23	1.56	0.013	0.27	0.00	0.00	555.70	555.81	555.54	555.81	561.13	5.32	28
27	27	26	553.79	553.49	41.70	0.0072	21	13.48	7.80	3.24	0	0.16	1.27	0.013	0.10	0.00	0.00	555.54	555.54	555.24	555.54	559.49	3.95	27
26	26	25	553.29	552.80	121.73	0.0040	21	10.08	8.75	3.64	0	0.21	1.80	0.013	0.37	0.00	0.00	555.04	554.99	554.61	555.04	559.54	4.50	26
25	25	24	552.60	552.16	107.52	0.0041	21	10.16	9.72	4.04	0	0.25	2.46	0.013	0.40	0.00	0.00	554.35	554.61	554.21	554.61	558.93	4.32	25
24	24	23	551.96	551.29	94.97	0.0071	27	26.08	13.53	3.40	0	0.18	2.43	0.013	0.18	0.00	0.00	554.21	553.77	553.99	554.21	558.10	3.89	24
23	23	11	551.09	550.60	61.99	0.0079	30	36.57	15.23	3.10	0	0.15	2.28	0.013	0.09	0.00	0.00	553.59	553.21	553.12	553.59	558.30	4.71	23
HYDRAULIC FLOW LINE =																								
22	22	9	552.47	545.93	148.64	0.0440	18	22.69																