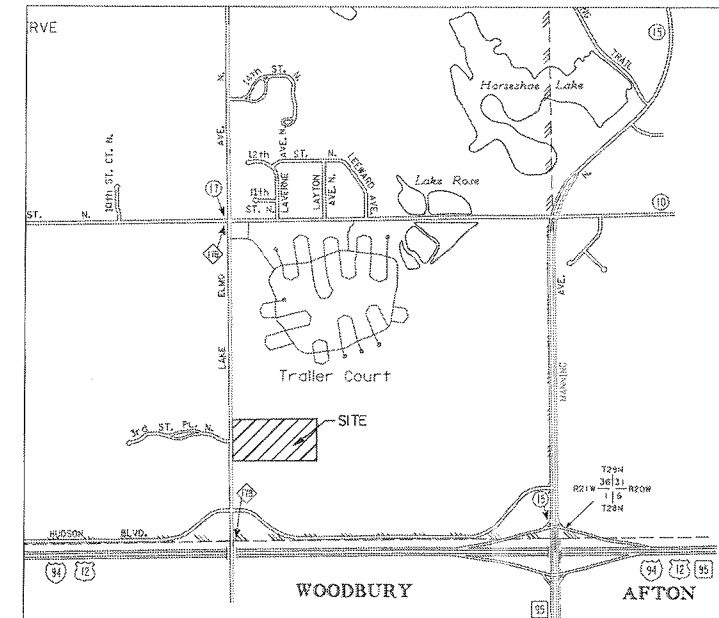


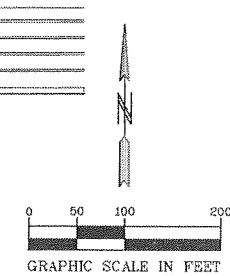
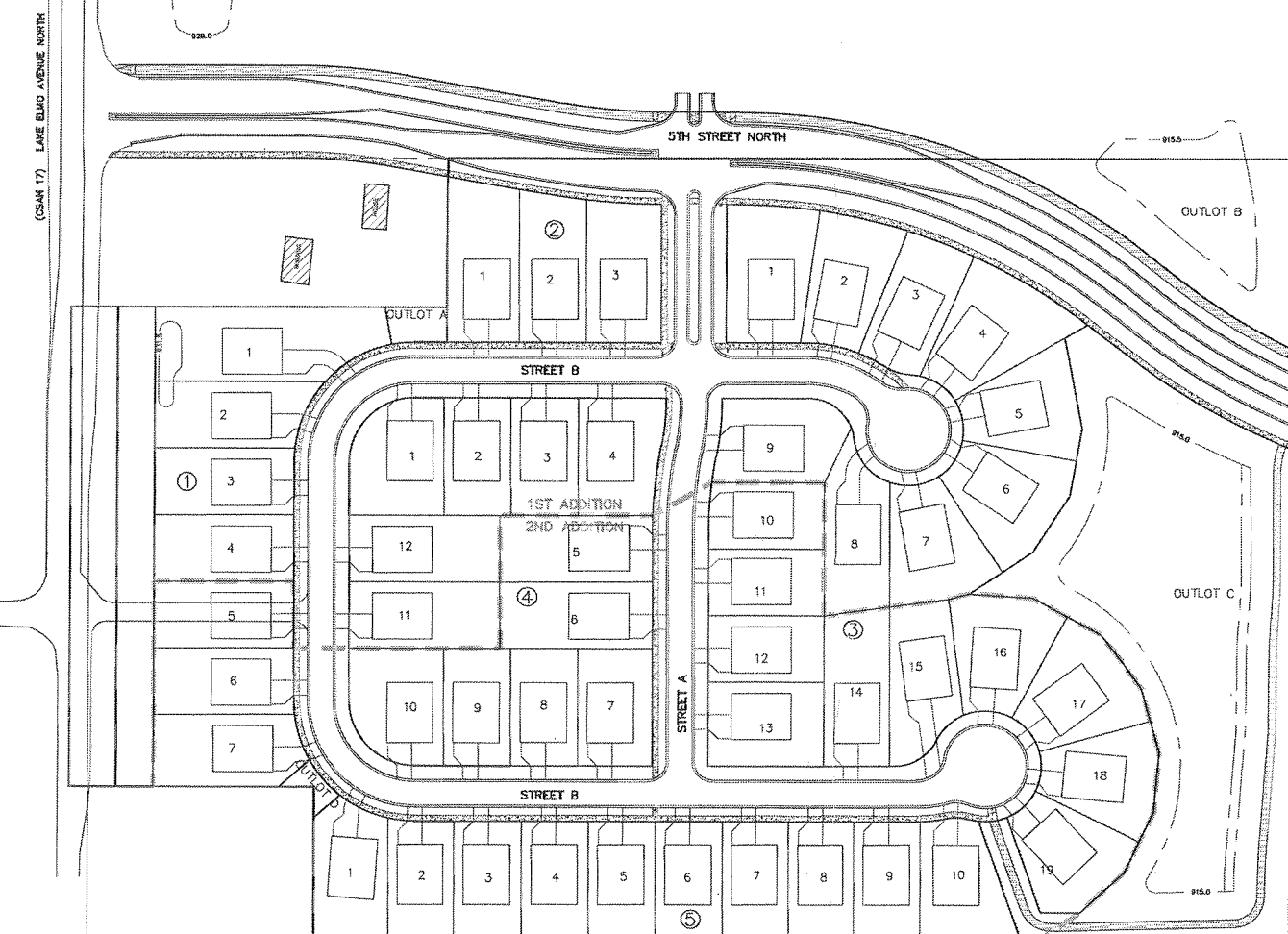
**LEGEND**

EXISTING	PROPOSED	FUTURE	DESCRIPTION
○	●	○	SANITARY MANHOLE
—	→	→	EXISTING SANITARY SEWER
→	→	→	PROPOSED SANITARY SEWER
→	→	→	FUTURE SANITARY SEWER
⊕	⊕	⊕	HYDRANT
▽	▽	▽	GATE VALVE
▽	▽	▽	REDUCER
—	—	—	EXISTING WATERMAIN
→	→	→	PROPOSED WATERMAIN
→	→	→	FUTURE WATERMAIN
□	□	□	CATCH BASIN
○	○	○	BEEHIVE
○	○	○	STORM MANHOLE
○	○	○	FLARED END SECTION
○	○	○	CONTROL STRUCTURE
→	→	→	EXISTING STORM SEWER
→	→	→	PROPOSED STORM SEWER
→	→	→	FUTURE STORM SEWER
—	—	—	SURMOUNTABLE CURB & GUTTER
—	—	—	B-STYLE CURB & GUTTER
—	—	—	RIBBON CURB & GUTTER
—	—	—	PHASE LINE
—	—	—	EASEMENT LINE
—	—	—	EXISTING 2' CONTOUR LINE
—	—	—	EXISTING 10' CONTOUR LINE
—	—	—	PROPOSED 2' CONTOUR LINE
—	—	—	PROPOSED 10' CONTOUR LINE
—	—	—	POND OUTLET LINE
—	—	—	POND HIGH WATER LINE
—	—	—	PROPOSED SPOT ELEVATION
—	—	—	EMERGENCY OVERFLOW
—	—	—	DELINEATED WETLAND LINE
—	—	—	FEMA FLOODPLAIN BOUNDARY
—	—	—	STANDARD EROSION CONTROL
—	—	—	HEAVY-DUTY EROSION CONTROL
—	—	—	TREE FENCE
—	—	—	RETAINING WALL
—	—	—	CONSERVATION AREA SIGN
—	—	—	WETLAND BUFFER SIGN
—	—	—	EX. CULVERT
—	—	—	EX. OVERHEAD UTILITY LINES
—	—	—	EX. UNDERGROUND TELEVISION LINE
—	—	—	EX. UNDERGROUND TELEPHONE LINE
—	—	—	EX. UNDERGROUND FIBER OPTIC LINE
—	—	—	EX. UNDERGROUND ELECTRIC LINE
—	—	—	EX. UNDERGROUND GAS LINE
—	—	—	EX. FENCE (BARBED WIRE)
—	—	—	EX. FENCE (CHAIN LINK)
—	—	—	EX. FENCE (WOOD)
—	—	—	EX. CAST IRON MONUMENT
—	—	—	EX. ELECTRIC BOX
—	—	—	EX. FLAG POLE
—	—	—	EX. NATURAL GAS METER
—	—	—	EX. HAND HOLE
—	—	—	EX. FOUND IRON PIPE
—	—	—	EX. JUDICIAL LAND MARK
—	—	—	EX. LIGHT POLE
—	—	—	EX. PK NAIL
—	—	—	EX. UTILITY POLE
—	—	—	EX. LAWN SPRINKLER VALVE
—	—	—	EX. LAWN SPRINKLER HEAD
—	—	—	EX. SEMAPHORE
—	—	—	EX. SERVICE
—	—	—	EX. TELEPHONE BOX
—	—	—	EX. TEST HOLE
—	—	—	EX. TELEVISION BOX
—	—	—	EX. WATER WELL
—	—	—	EX. MONITORING WELL
—	—	—	EX. MAILBOX
—	—	—	EX. CONTROL POINT
—	—	—	EX. SPIKE
—	—	—	EX. SIGN
—	—	—	EX. CLEANOUT
—	—	—	EX. SIGNIFICANT TREE
—	—	—	EX. TREE LINE
—	—	—	EX. GRAVEL SURFACE
—	—	—	EX. BITUMINOUS SURFACE
—	—	—	EX. CONCRETE SURFACE
—	—	—	SELECT BACKFILL MATERIAL
—	—	—	GRAVEL CONST. ENTRANCE

# HUNTERS CROSSING PRELIMINARY PLAT LAKE ELMO, MINNESOTA



LOCATION MAP



PREPARED BY PIONEER ENGINEERING, P.A.  
 PAUL J. CHERNE  
 REGISTERED PROFESSIONAL CIVIL ENGINEER  
 19860  
 REG. NO.

PETER J. HAWKINSON  
 REGISTERED PROFESSIONAL LAND SURVEYOR  
 42299  
 REG. NO.

DEVELOPER  
 RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344  
 CONTACT: TRACEY RUST  
 TRUST@RYLAND.COM  
 (952) 229-6000

LANDOWNER  
 NATHAN LANDUCCI  
 13230 20TH STREET CT. N.  
 STILLWATER, MINNESOTA 55082  
 (651) 894-2582

PROPOSED DEVELOPMENT PHASING  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
 UTILITY AND STREET CONSTRUCTION TO BE PERFORMED IN TWO PHASES.

**SETBACK REQUIREMENTS**  
 LDR STANDARDS:  
 FRONT SETBACK: 25'  
 REAR YARD SETBACK: 20'  
 SIDE SETBACK: 10' LIVING SPACE, 5' GARAGE  
 CORNER SIDE SETBACK: 15'  
 MINIMUM LOT WIDTH: 60'  
 MINIMUM LOT AREA: 8,000 SF  
 MAXIMUM BUILDING COVERAGE: 40%

- SHEET INDEX**
1. COVER SHEET
  2. EXISTING CONDITIONS
  3. PRELIMINARY PLAT
  4. PRELIMINARY SITE PLAN
  - 5-6. PRELIMINARY UTILITY PLAN
  - 7-11. PRELIMINARY GRADING PLAN
  12. EROSION CONTROL PLAN
  - 13-16. STREET PLAN & PROFILES
  - 17-18. DETAILS

- L1. LANDSCAPE PLAN**  
**T1. TREE PRESERVATION PLAN**



2422 Enterprise Drive  
 Mendota Heights, MN 55120  
 (651) 681-1914  
 Fax: 681-9488  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherne  
 Reg. No.: 19860  
 Date: 04-28-2014

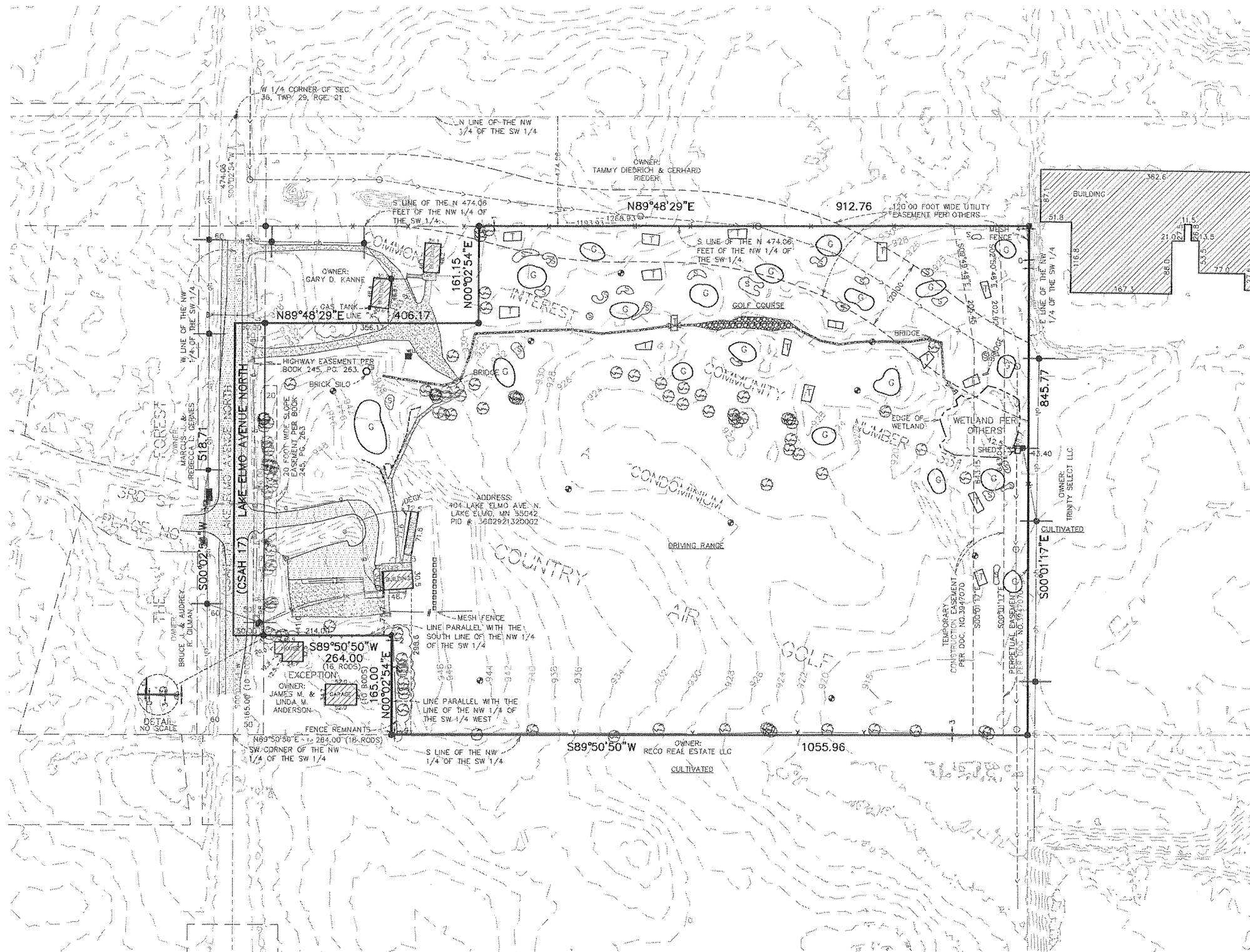
Revisions  
 Date: 04-28-2014  
 Design: PJCKAW  
 Drawn: KAWAR

COVER SHEET

RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA

1 OF 18



- Denotes rip rap
- Denotes gravel
- Denotes bituminous
- Denotes concrete
- Typical golf green
- Typical sandtrap
- Typical tee box
- Denotes storm sewer line
- Denotes sanitary sewer line
- Denotes overhead utility lines
- Denotes underground television line
- Denotes underground telephone line
- Denotes underground electric line
- Denotes underground gas line
- Denotes fence (barbed wire)
- Denotes fence (chain link)
- Denotes fence (wood)
- Denotes retaining wall
- Denotes catch basin
- Denotes cast iron monument
- Denotes electric box
- Denotes flared end section
- Denotes found iron pipe
- Denotes light pole
- Denotes manhole other than sanitary or storm
- Denotes sanitary or storm manhole
- Denotes telephone box
- Denotes test hole
- Denotes television box
- Denotes water well
- Denotes sign
- Denotes tree
- Denotes flagpole
- Denotes utility pole
- Denotes property line
- Denotes ROW line
- Denotes section line
- Denotes easement line
- Denotes property and ROW line outside of property
- Denotes major contour line
- Denotes minor contour line

ALTA survey completed: 10/14/13

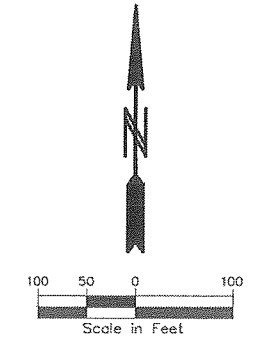
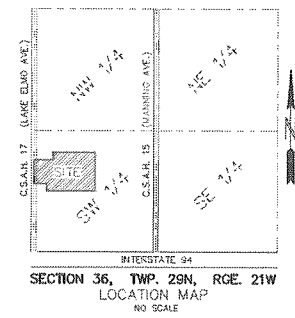
Legal description per title commitment

The Northwest Quarter of the Southwest Quarter of Section 36, Township 29 North, Range 21 West, Washington County, Minnesota, lying southerly of the following described "Line X":

Commencing at the West Quarter corner of said Section 36; thence South 00 degrees 02 minutes 54 seconds West, orientation of bearing system is assumed along the west line of said Northwest Quarter of the Southwest Quarter, a distance of 474.06 feet to the south line of North 474.06 feet of said Northwest Quarter of the Southwest Quarter; thence continuing along said west line, South 00 degrees 02 minutes 54 seconds West, a distance of 161.15 feet to the point of beginning of "Line X"; thence North 89 degrees 48 minutes 29 seconds East a distance of 406.17 feet; thence North 00 degrees 02 minutes 54 seconds East a distance of 161.15 feet, to the said south line of the North 474.06 feet; thence North 89 degrees 48 minutes 29 seconds East, along said south line, a distance of 912.76 feet to the east line of said Northwest Quarter of the Southwest Quarter of said "line X" there terminating.

EXCEPT that part of said Northwest Quarter of the Southwest Quarter described as follows:

Beginning at the southwest corner of said Northwest Quarter of the Southwest Quarter; thence East along the south line of said Northwest Quarter of the Southwest Quarter a distance of 16 Rods; thence North along a line parallel with the west line of said Northwest Quarter of the Southwest Quarter a distance of 10 rods; thence West on a line parallel with the south line of said Northwest Quarter of the Southwest Quarter a distance of 16 rods to said west line; thence South along said west line a distance of 10 rods to the point of beginning.



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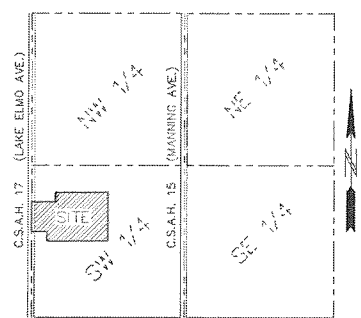
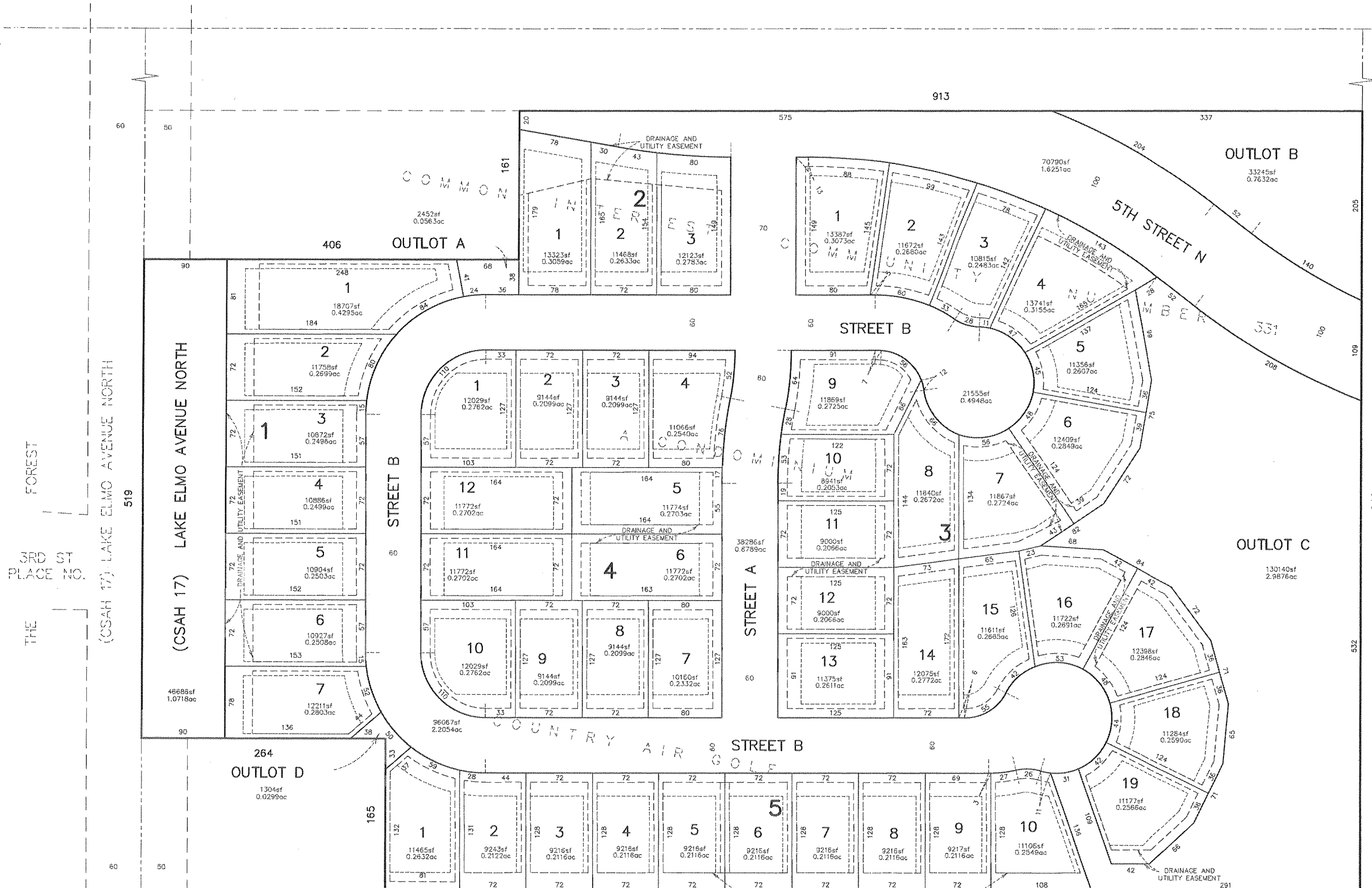
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Surveyor under the laws of the State of Minnesota.  
 Name: Peter J. Hawkinson  
 Reg. No.: 42299 Date: 4/29/14

Revisions:  
 Date: 4/29/14  
 Designed:  
 Drawn: mlp

EXISTING CONDITIONS

RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA



SECTION 36, TWP. 29N, RGE. 21W  
LOCATION MAP  
NO SCALE

**DEVELOPER**  
 RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344  
 CONTACT: TRACEY RUST  
 TRUST@RYLAND.COM  
 (952) 229-6000

**LANDOWNER**  
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 13230 30TH STREET CT. N.  
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Legal description per title commitment

The Northwest Quarter of the Southwest Quarter of Section 36, Township 29 North, Range 21 West, Washington County, Minnesota, lying southerly of the following described "Line X"

Commencing at the West Quarter corner of said Section 36; thence South 00 degrees 02 minutes 54 seconds West, orientation of bearing system is assumed along the west line of said Northwest Quarter of the Southwest Quarter, a distance of 474.06 feet to the south line of North 474.06 feet of said Northwest Quarter of the Southwest Quarter; thence continuing along said west line, South 00 degrees 02 minutes 54 seconds West, a distance of 161.15 feet to the point of beginning of "Line X"; thence North 89 degrees 48 minutes 29 seconds East a distance of 406.17 feet; thence North 00 degrees 02 minutes 54 seconds East a distance of 161.15 feet, to the said south line of the North 474.06 feet; thence North 89 degrees 48 minutes 29 seconds East, along said south line, a distance of 912.76 feet to the east line of said Northwest Quarter of the Southwest Quarter of said "line X" there terminating.

EXCEPT that part of said Northwest Quarter of the Southwest Quarter described as follows:

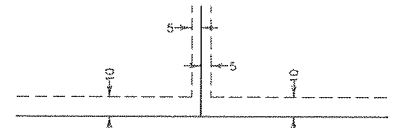
Beginning at the southwest corner of said Northwest Quarter of the Southwest Quarter; thence East along the south line of said Northwest Quarter of the Southwest Quarter a distance of 16 Rods; thence North along a line parallel with the west line of said Northwest Quarter of the Southwest Quarter a distance of 10 rods; thence West on a line parallel with the south line of said Northwest Quarter of the Southwest Quarter a distance of 16 rods to said west line; thence South along said west line a distance of 10 rods to the point of beginning.

TOTAL GROSS AREA	23.10	ACRES
TOTAL LOT AREA	12.99	ACRES
NUMBER OF LOTS	51	
LARGEST LOT	18,707	SQ. FT.
SMALLEST LOT	8,941	SQ. FT.
AVERAGE LOT	11,094	SQ. FT.
NUMBER OF OUTLOTS	4	
TOTAL OUTLOT AREA	3.84	ACRES
TOTAL RIGHT OF WAY AREA	6.27	ACRES
GROSS DENSITY (EXCLUDES OUTLOTS)	2.65	LOTS/ACRE
NET DENSITY (EXCLUDES OUTLOTS & R/W)	3.93	LOTS/ACRE
EXISTING ZONING	RT	
PROPOSED ZONING	DR	
UTILITIES	AVAILABLE	

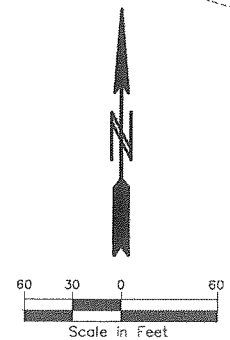
**LEGEND**

- Denotes property line
- Denotes ROW line
- Denotes outlet line
- Denotes lot line
- Denotes section line
- Denotes building setback line
- Denotes easement line
- Denotes property and ROW line outside of property

**DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:**



being 5 feet in width, and adjoining lot lines unless otherwise indicated, and 10 feet in width and adjoining street lines and rear lot lines unless otherwise indicated on the plat.



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 Mendota Heights, MN 55120  
 (651) 681-1914  
 Fax: 681-9488  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Surveyor under the laws of the State of Minnesota.  
 Name: Peter J. Hawkinson  
 Reg. No. 4229 Date: 4/29/14

Revisions  
 Date: 4/29/14  
 Designed: [Signature]  
 Drawn: mdp

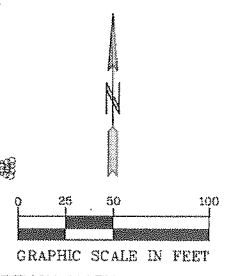
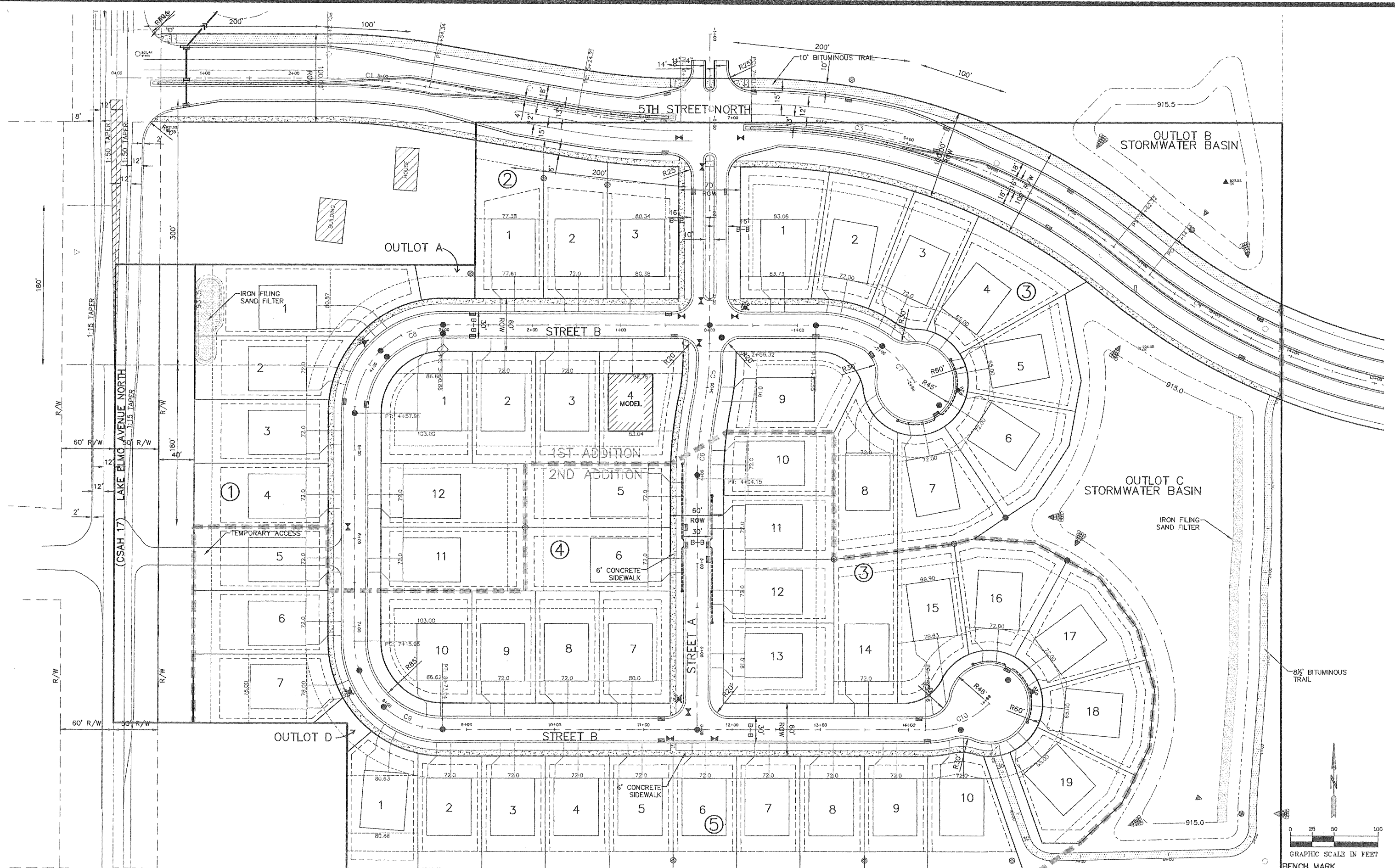
PRELIMINARY PLAT

RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA

3 OF 18





BENCH MARK  
 MN/DOT 8282 AG  
 ELEV=943.87 (1983 datum)  
 00-ENG-111105-SHEET-SITE

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 Fax: 681-9488  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Chernie  
 Reg. No.: 19860  
 Date: 04-28-2014

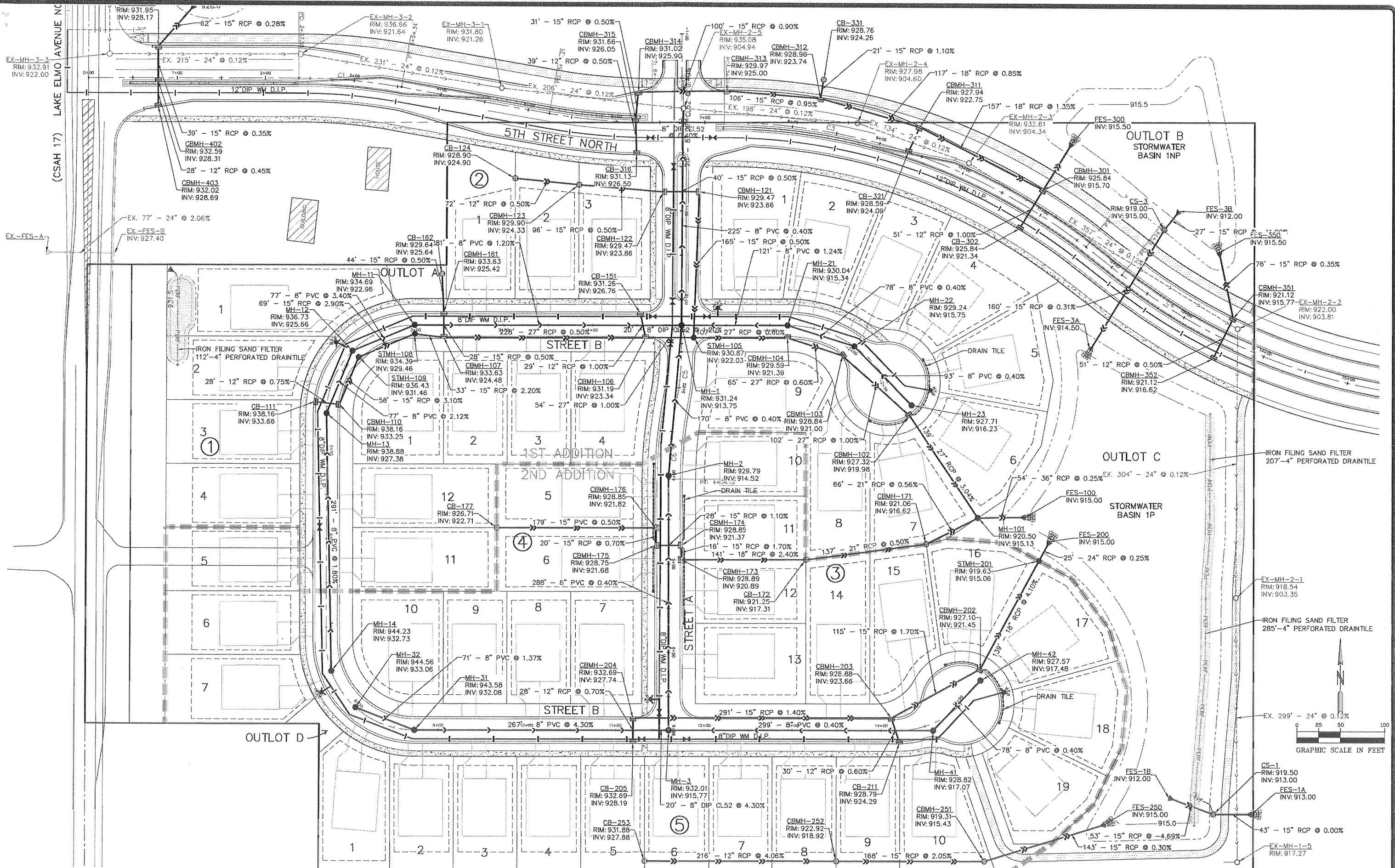
Revisions:  
 Date: 04-28-2014  
 Design: PIC/KAW  
 Drawn: KAWAR

**PRELIMINARY SITE PLAN**

**RYLAND HOMES**  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA





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 (651) 681-1914  
 Fax: 681-9483  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherne  
 Reg. No.: 19869  
 Date: 04-28-2014

Revisions  
 Date: 04-28-2014  
 Designated: PIC/KAW  
 Drawn: KAWIAR

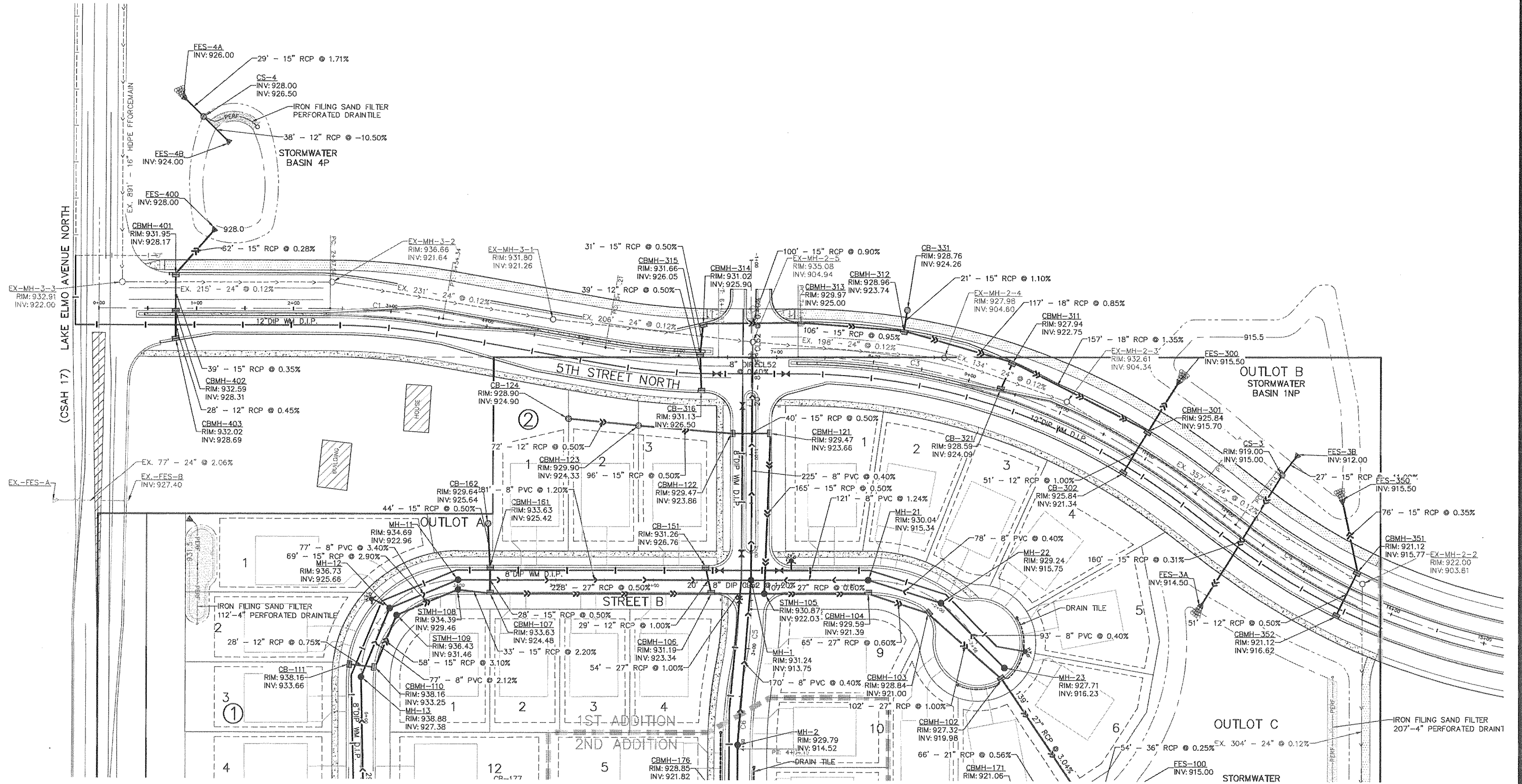
**PRELIMINARY UTILITY PLAN**

**RYLAND HOMES**  
 7509 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

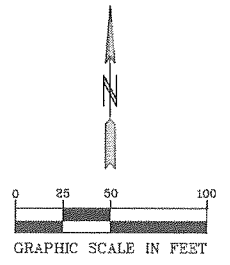
**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA

5 OF 18

PROPOSED DEVELOPMENT PHASING.  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
 UTILITY AND STREET CONSTRUCTION TO BE PERFORMED IN TWO PHASES.  
 09-ENR-115105-SHEET-UTIL



PROPOSED DEVELOPMENT PHASING  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
 UTILITY AND STREET CONSTRUCTION TO BE PERFORMED IN TWO PHASES.



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 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherne  
 Reg. No.: 19960  
 Date: 04-28-2014

Revisions

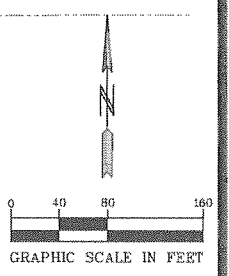
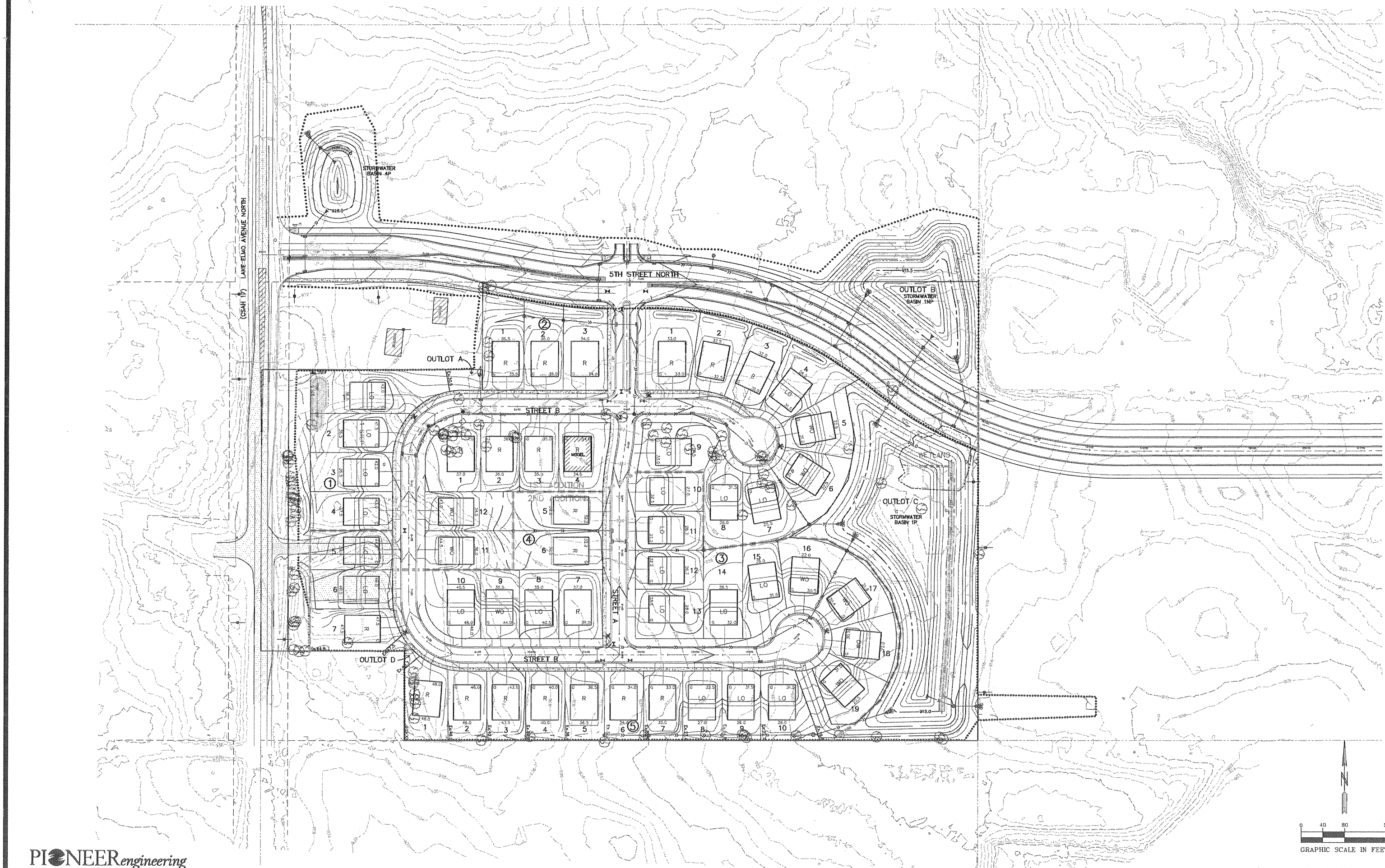
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 Drawn: KAWAR

**PRELIMINARY UTILITY PLAN**

**RYLAND HOMES**  
 7509 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA

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 Fax: 681-0488  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherne  
 Reg. No.: 19667 Date: 04-28-2014

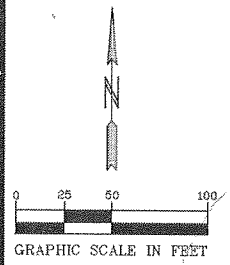
Revisions  
 Date: 04-28-2014  
 Design: PIC/KAW  
 Drawn: KAWAR

**OVERALL PRELIMINARY GRADING PLAN**

**RYLAND HOMES**  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

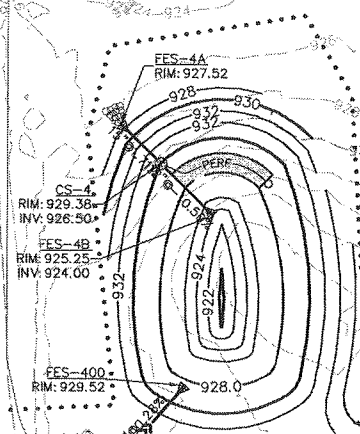
**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA



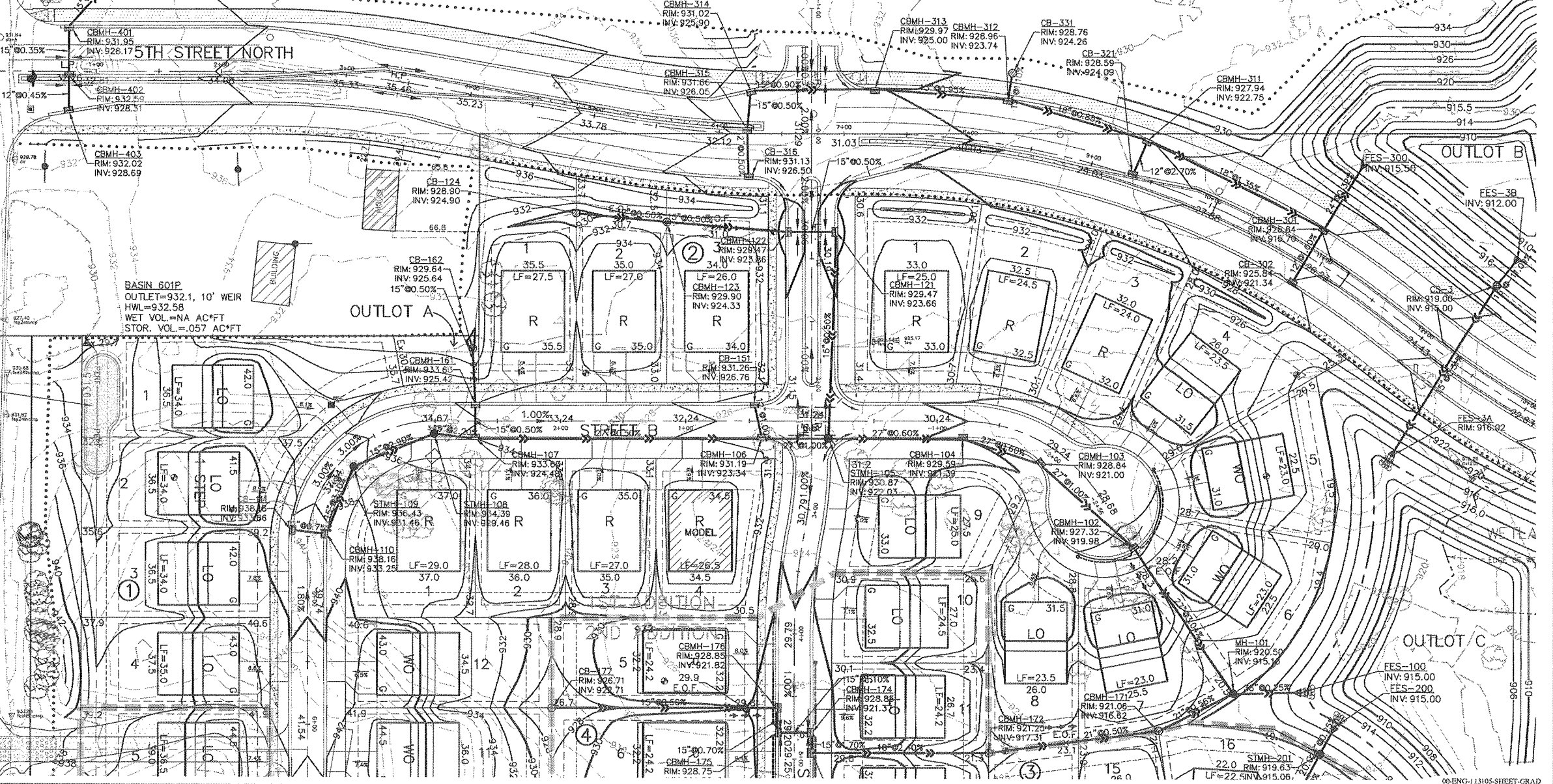


**PROPOSED DEVELOPMENT PHASING**  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
 UTILITY AND STREET CONSTRUCTION TO BE PERFORMED IN TWO PHASES.

**SETBACK REQUIREMENTS**  
 LDR STANDARDS:  
 FRONT SETBACK: 25'  
 REAR YARD SETBACK: 20'  
 SIDE SETBACK: 10' LIVING SPACE, 5' GARAGE  
 CORNER SIDE SETBACK: 15'  
 MINIMUM LOT WIDTH: 60'  
 MINIMUM LOT AREA: 8,000 SF  
 MAXIMUM BUILDING COVERAGE: 40%



**BASIN 4P**  
 OUTLET=928.31, 6" ORIFICE  
 SAND FILTER ELEV: 928.0  
 SAND FILTER AREA: 505 SF  
 HWL=930.01  
 WET VOL.=0.344 AC\*FT  
 STOR. VOL.=0.421 AC\*FT



**BASIN 601P**  
 OUTLET=932.1, 10" WEIR  
 HWL=932.58  
 WET VOL.=NA AC\*FT  
 STOR. VOL.=.057 AC\*FT

SAND FILTER ELEV: 931.5  
 SAND FILTER AREA: 265 SF

**PIONEER Engineering**  
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 Mendota Heights, MN 55120  
 (651) 681-1914  
 Fax: 681-9493  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherne  
 Reg. No.: 19960  
 Date: 04-28-2014

Revisions:  
 Date: 04-28-2014  
 Designer: PIC/KAW  
 Drawn: KAWAR

**PRELIMINARY GRADING AND DRAINAGE PLAN**

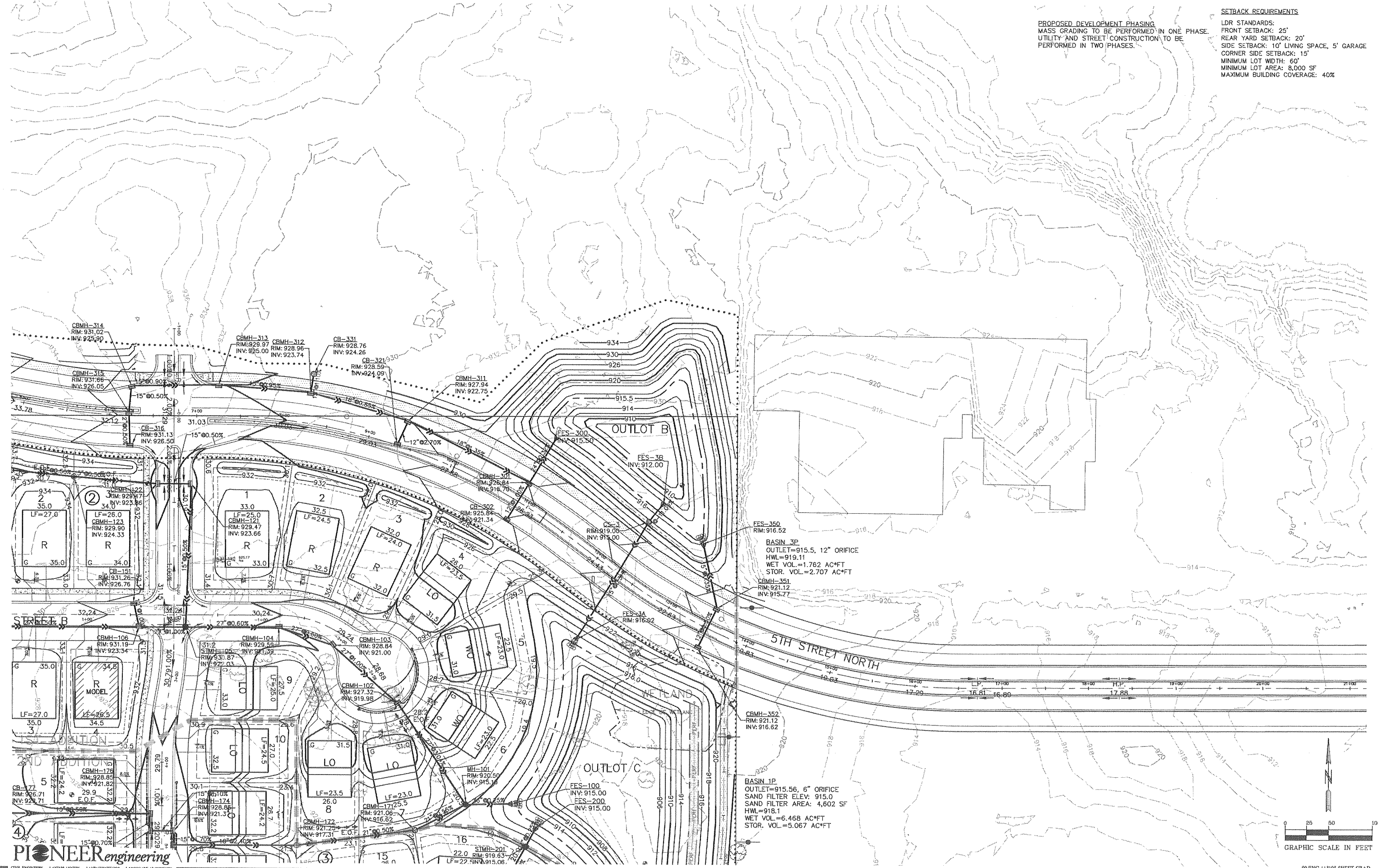
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 EDEN PRAIRIE, MINNESOTA 55344

**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA

8 OF 18

PROPOSED DEVELOPMENT PHASING  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
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SETBACK REQUIREMENTS  
 LDR STANDARDS:  
 FRONT SETBACK: 25'  
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 CORNER SIDE SETBACK: 15'  
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 MINIMUM LOT AREA: 8,000 SF  
 MAXIMUM BUILDING COVERAGE: 40%



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 Fax: 681-9483  
 www.pioneereng.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Name: Paul J. Cherno  
 Reg. No.: (1996)  
 Date: 04-28-2014

Revisions  
 Date: 04-28-2014  
 Designed: PIC/KAW  
 Drawn: KAWJAW

PRELIMINARY GRADING AND DRAINAGE PLAN

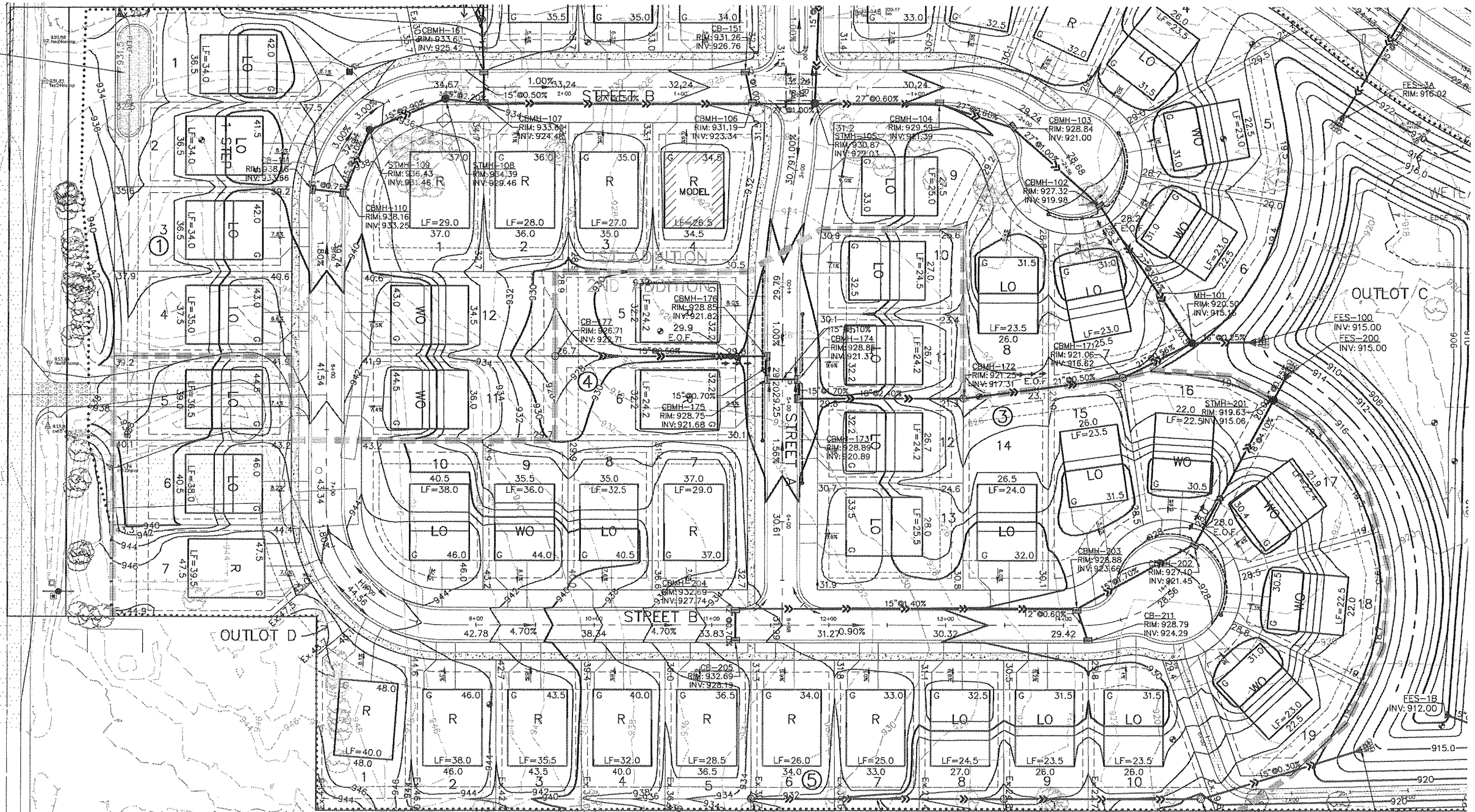
RYLAND HOMES  
 7599 ANAGRAM DRIVE  
 EDEN PRAIRIE, MINNESOTA 55344

HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA

9 OF 18

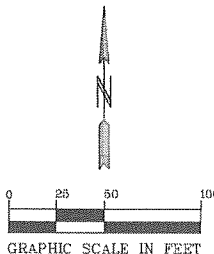


SAND FILTER ELEV: 931.5  
SAND FILTER AREA: 265 SF



**SETBACK REQUIREMENTS**  
 LDR STANDARDS:  
 FRONT SETBACK: 25'  
 REAR YARD SETBACK: 20'  
 SIDE SETBACK: 10' LIVING SPACE, 5' GARAGE  
 CORNER SIDE SETBACK: 15'  
 MINIMUM LOT WIDTH: 60'  
 MINIMUM LOT AREA: 8,000 SF  
 MAXIMUM BUILDING COVERAGE: 40%

**PROPOSED DEVELOPMENT PHASING**  
 MASS GRADING TO BE PERFORMED IN ONE PHASE.  
 UTILITY AND STREET CONSTRUCTION TO BE PERFORMED IN TWO PHASES.



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 Name: Paul J. Cherne  
 Reg. No.: 19960  
 Date: 04-28-2014

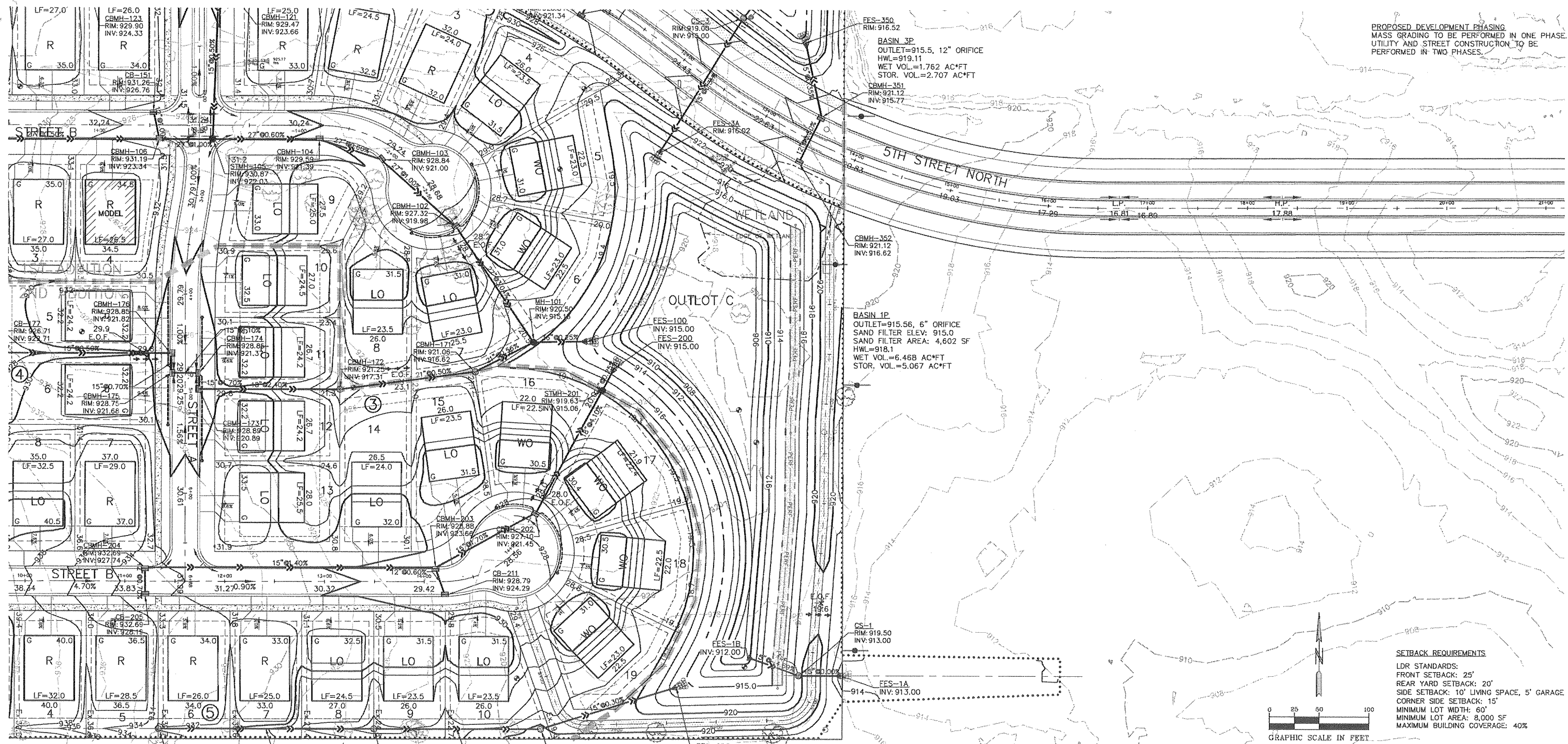
Revisions  
 Date: 04-28-2014  
 Designated: PIC/KAW  
 Drawn: KAWIAR

**PRELIMINARY GRADING AND DRAINAGE PLAN**

**RYLAND HOMES**  
 7509 ANAGRAM DRIVE  
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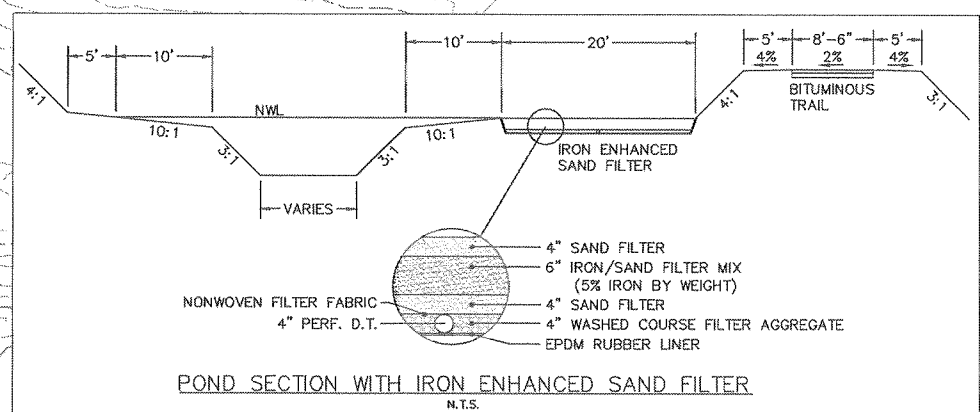
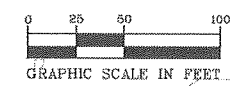
**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA





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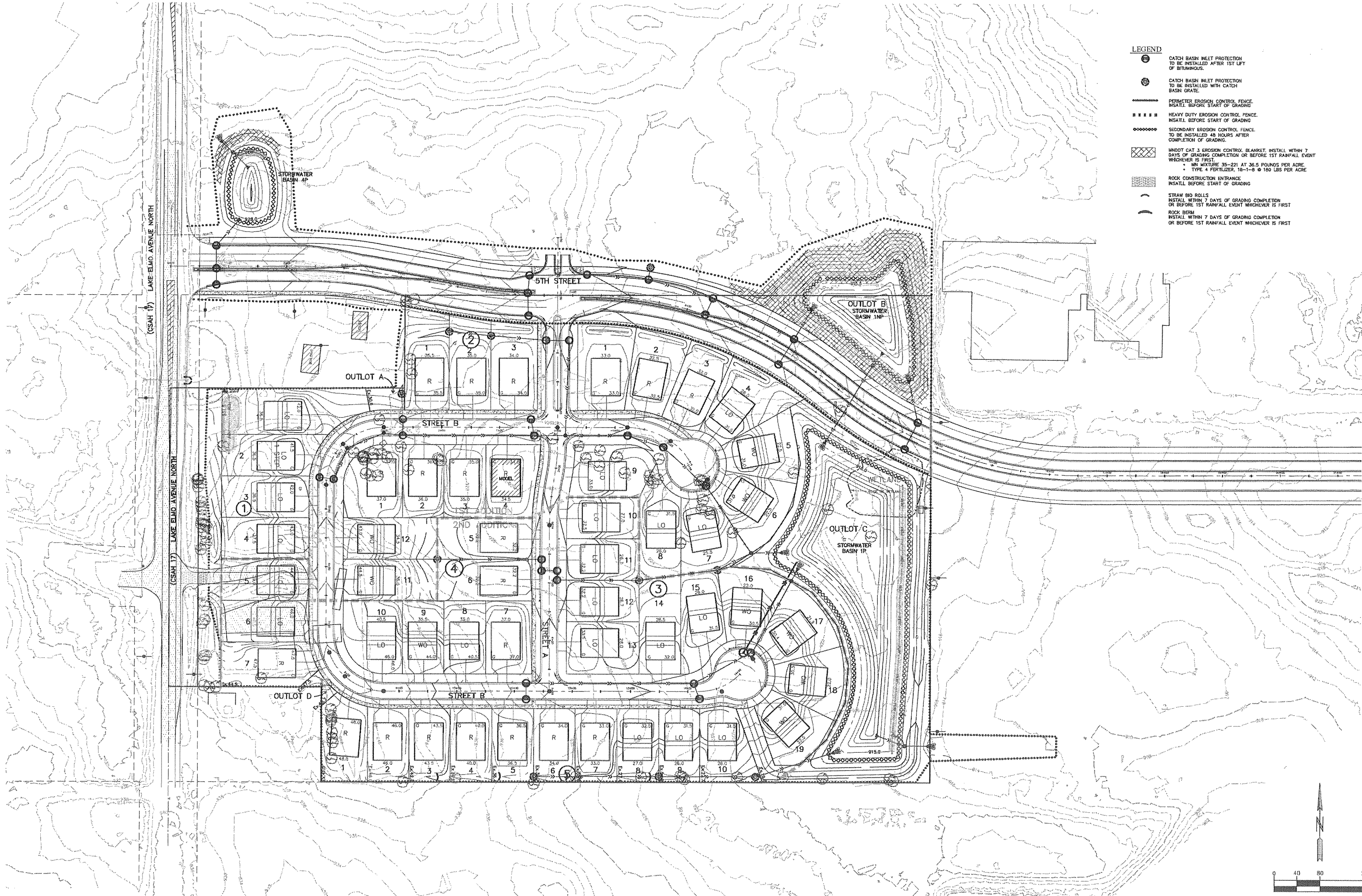
**PRELIMINARY GRADING AND DRAINAGE PLAN**

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**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA

11 OF 18

- LEGEND**
- CATCH BASIN INLET PROTECTION TO BE INSTALLED AFTER 1ST LIFT OF BITUMINOUS.
  - CATCH BASIN INLET PROTECTION TO BE INSTALLED WITH CATCH BASIN GRATE.
  - PERIMETER EROSION CONTROL FENCE. INSTALL BEFORE START OF GRADING.
  - HEAVY DUTY EROSION CONTROL FENCE. INSTALL BEFORE START OF GRADING.
  - SECONDARY EROSION CONTROL FENCE. TO BE INSTALLED 48 HOURS AFTER COMPLETION OF GRADING.
  - MANDY CAT 3 EROSION CONTROL BLANKET. INSTALL WITHIN 7 DAYS OF GRADING COMPLETION OR BEFORE 1ST RAINFALL EVENT WHICHEVER IS FIRST.  
• MIXTURE 35-221 AT 36.5 POUNDS PER ACRE.  
• TYPE 4 FERTILIZER, 18-1-8 @ 100 LBS PER ACRE.
  - ROCK CONSTRUCTION ENTRANCE. INSTALL BEFORE START OF GRADING.
  - STRAW BIO ROLLS. INSTALL WITHIN 7 DAYS OF GRADING COMPLETION OR BEFORE 1ST RAINFALL EVENT WHICHEVER IS FIRST.
  - ROCK BERM. INSTALL WITHIN 7 DAYS OF GRADING COMPLETION OR BEFORE 1ST RAINFALL EVENT WHICHEVER IS FIRST.



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 Reg. No.: 19667 Date: 04-28-2014

Revisions  
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 Design: PIC/KAW  
 Drawn: KAW/AR

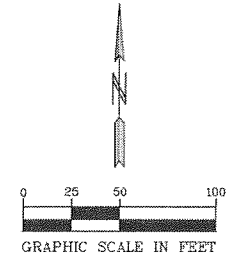
**EROSION CONTROL PLAN**

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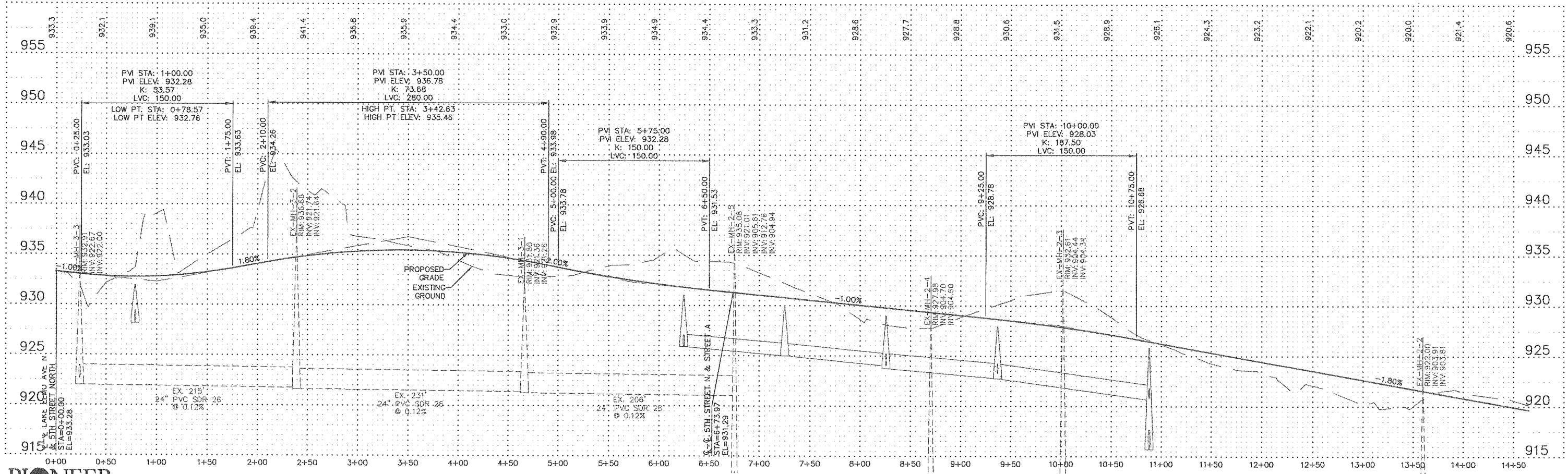
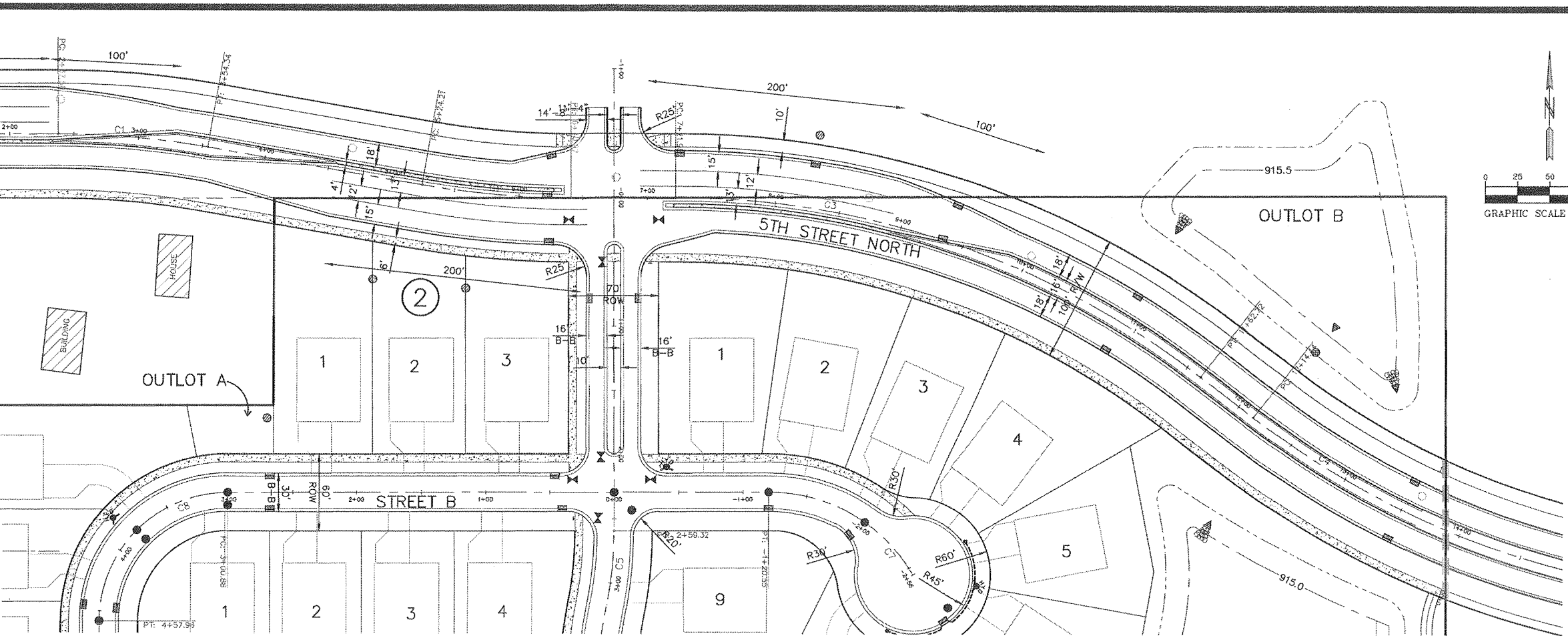
**HUNTERS CROSSING**  
 LAKE ELMO, MINNESOTA

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LAKE ELMO AVENUE NORTH  
(CSAH 17)



CURVE TABLE						
CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
C1	10°01'48"	116.76	667.00	58.53	2+37.58	3+54.34
C2	10°01'48"	116.76	667.00	58.53	5+24.21	6+40.97
C3	37°51'35"	440.74	667.00	228.75	7+21.98	11+62.72
C4	37°51'35"	440.74	667.00	228.75	12+14.44	16+55.18



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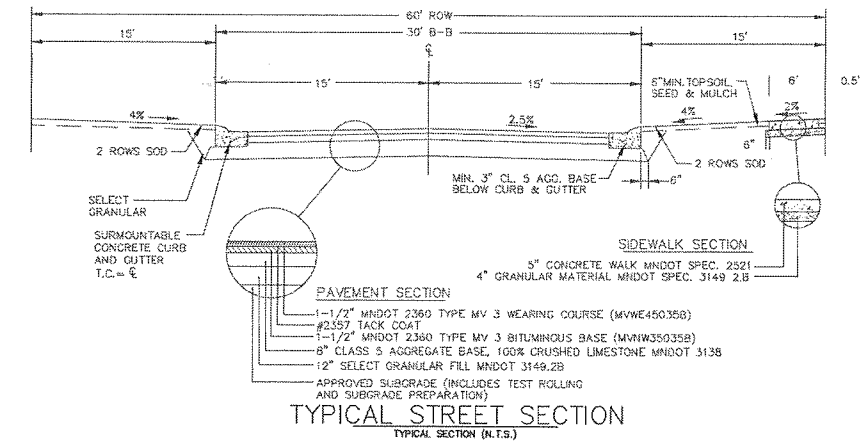
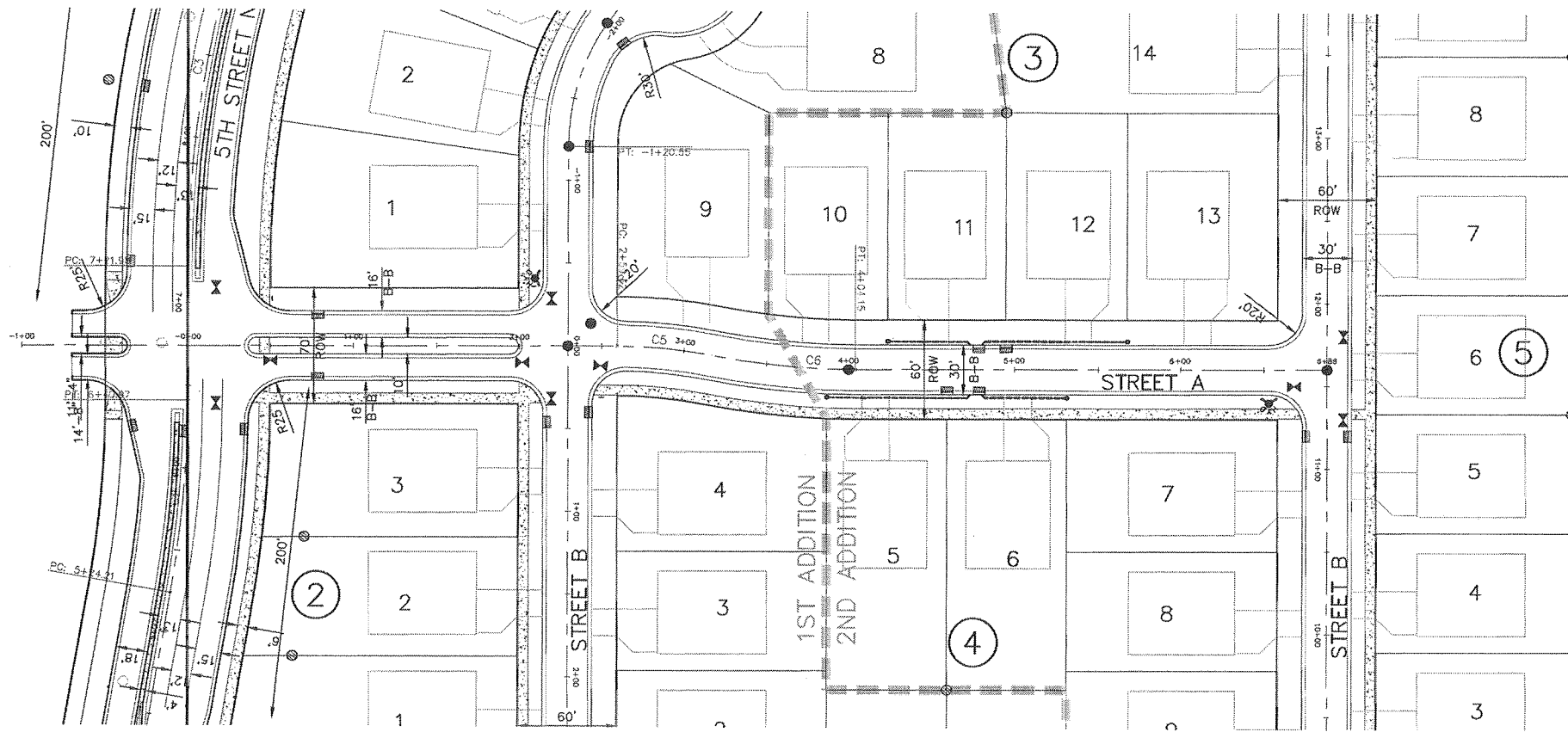
Revisions  
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**PRELIMINARY STREET PLAN**

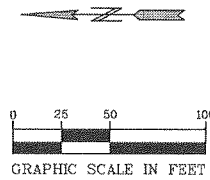
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**HUNTERS CROSSING**  
LAKE ELMO, MINNESOTA

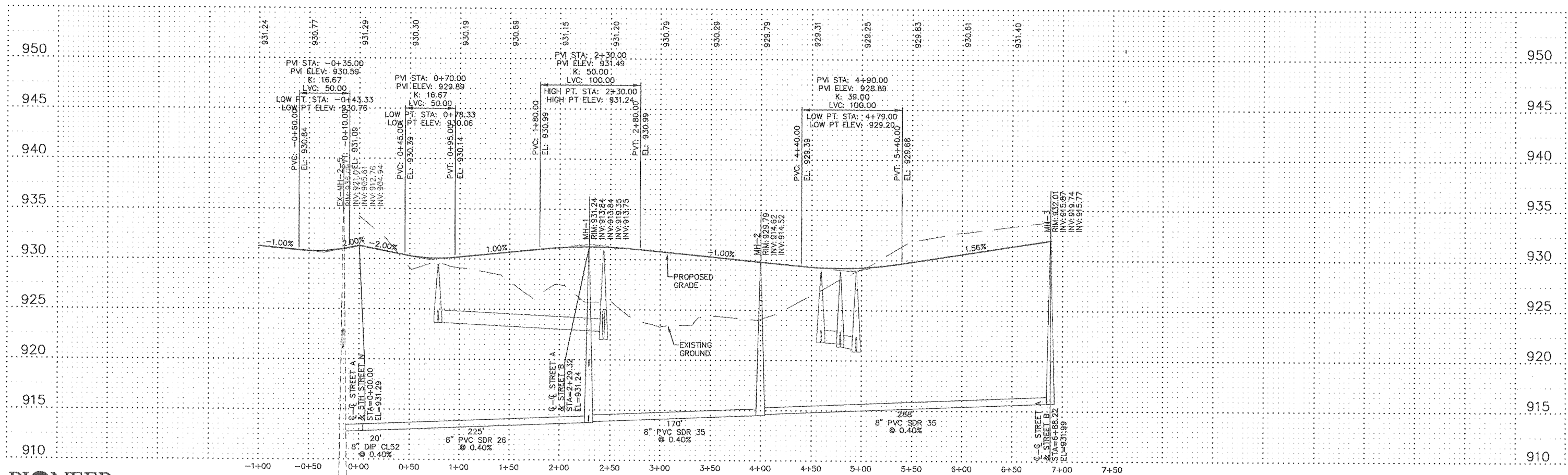




CURVE TABLE						
CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
C5	11°05'15"	58.05	300.00	29.12	2+59.32	3+17.38
C6	11°02'54"	86.77	450.00	43.52	3+17.38	4+04.15



STREET A



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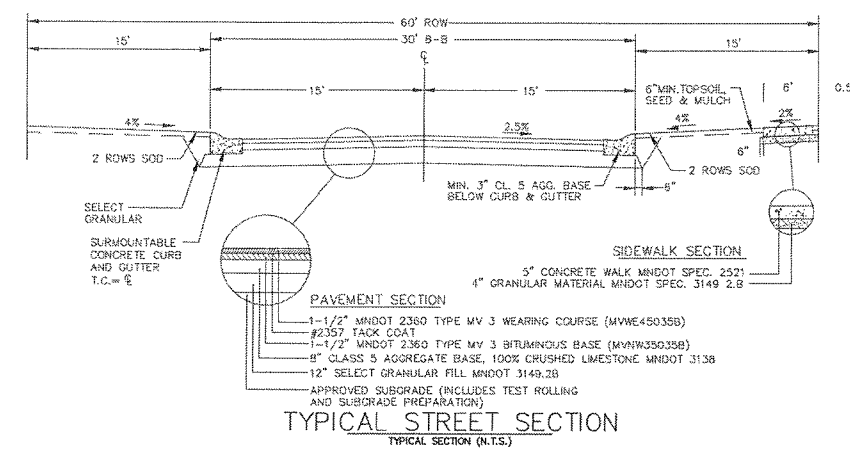
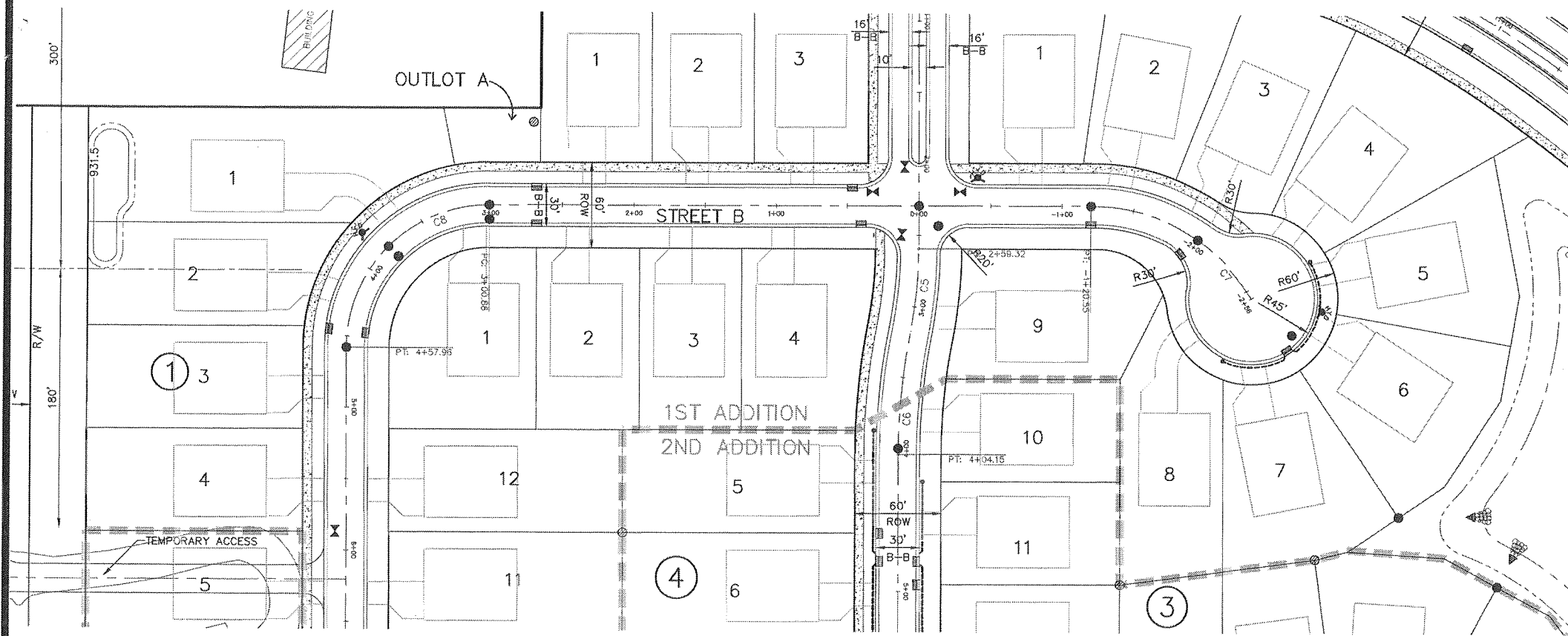
Revisits

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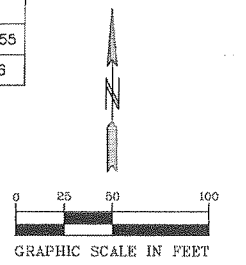
PRELIMINARY STREET PLAN

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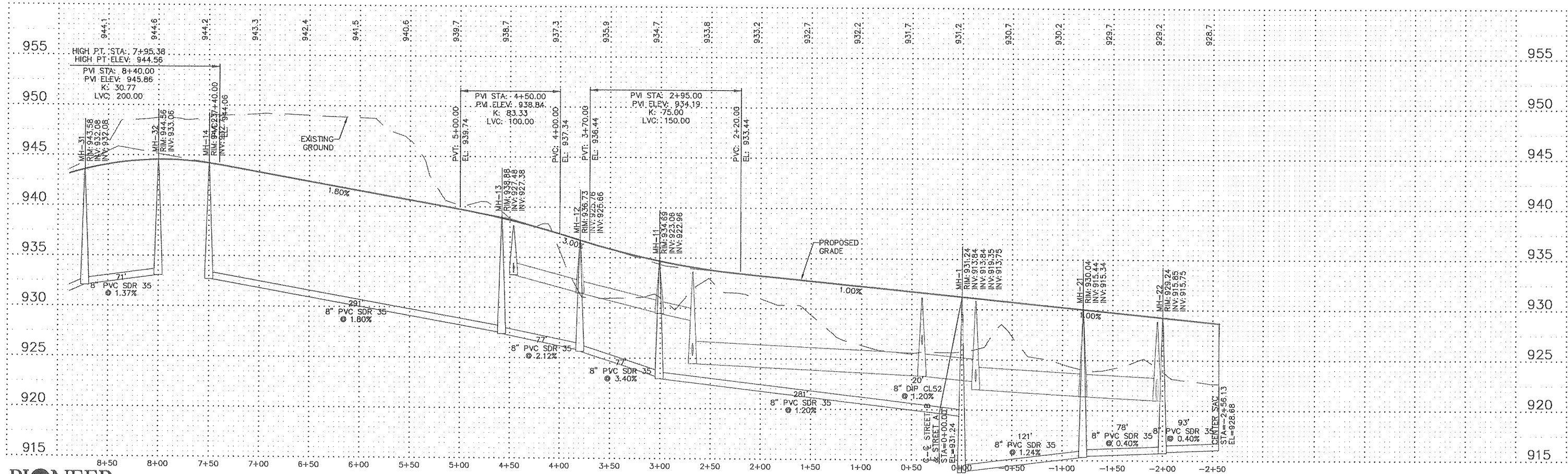
HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA



CURVE TABLE						
CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
C7	59°41'55"	135.59	130.13	74.67	-2+56.13	-1+20.55
C8	90°00'00"	157.08	100.00	100.00	3+00.88	4+57.96



STREET B



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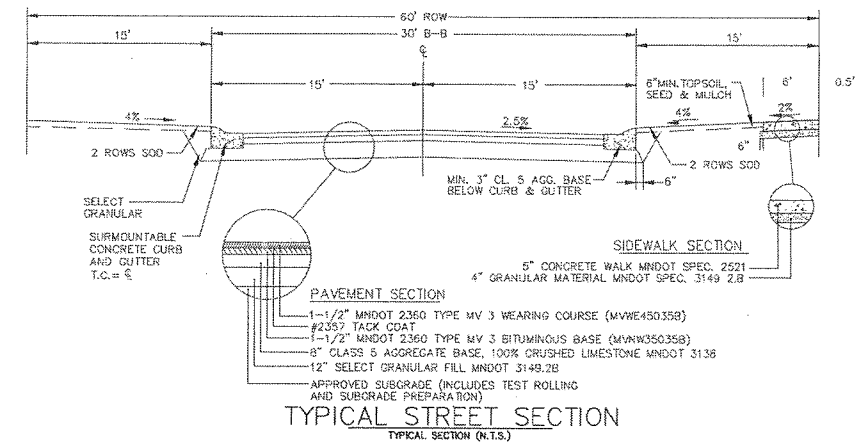
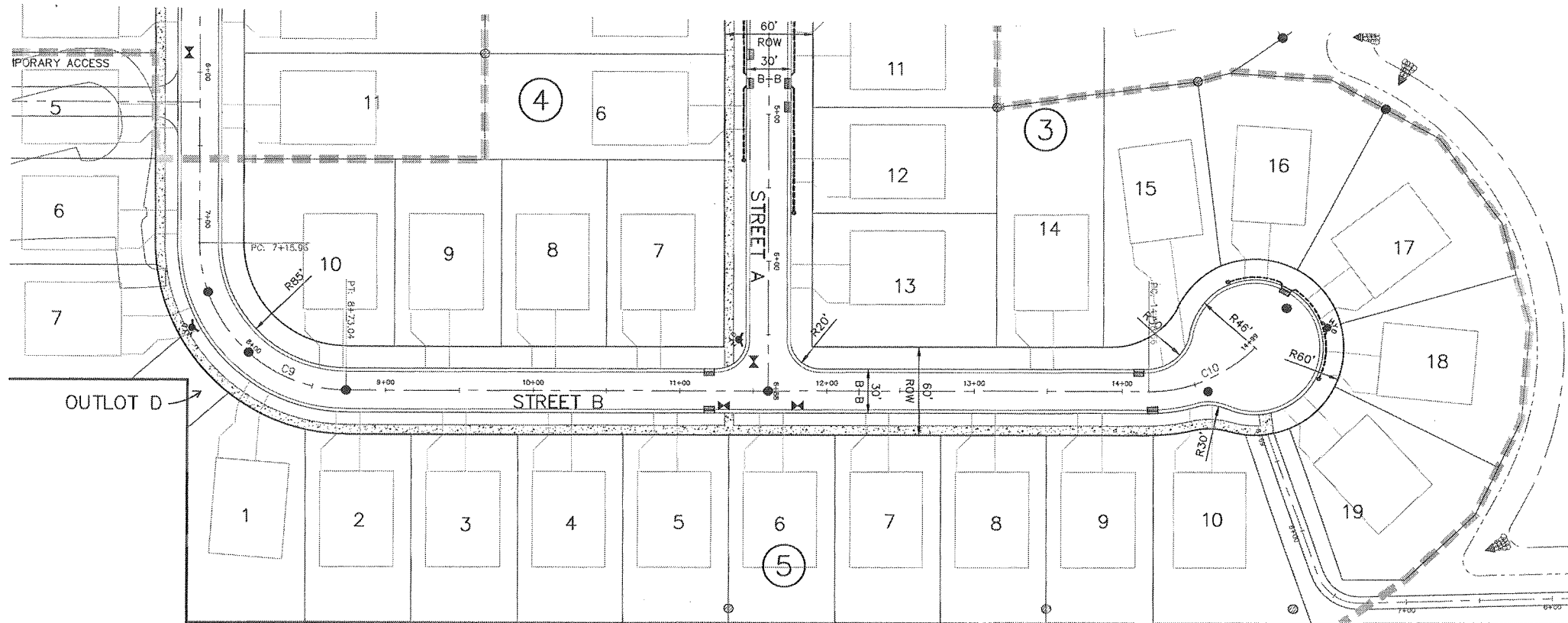
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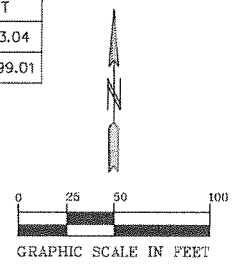
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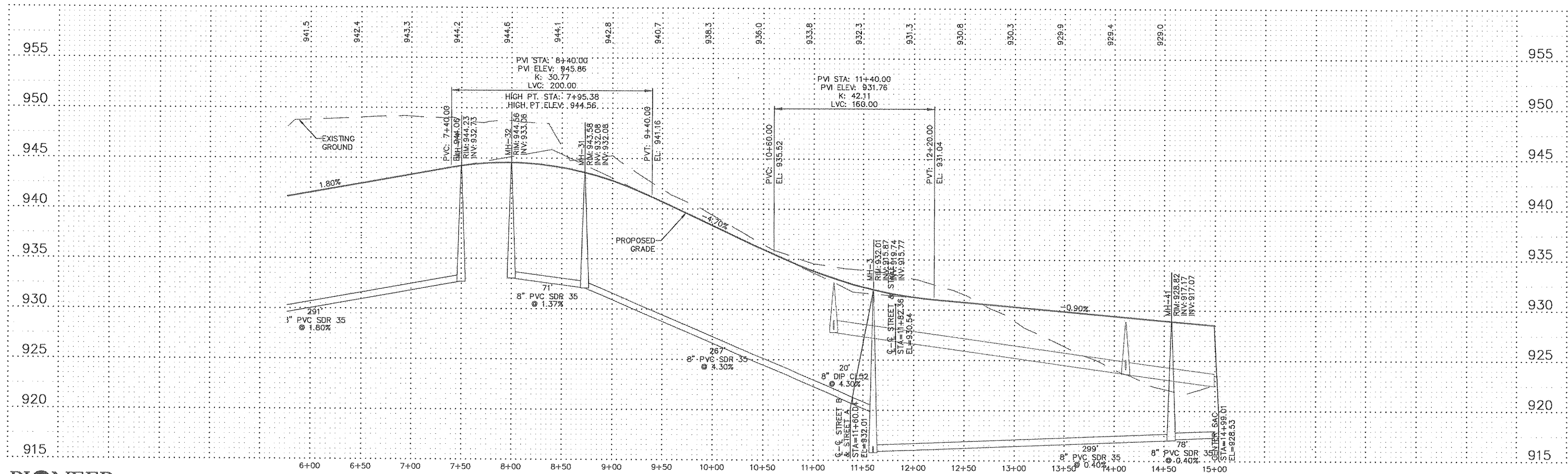
HUNTERS CROSSING  
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CURVE TABLE						
CURVE	DELTA	LENGTH	RADIUS	TANGENT	PC	PT
C9	90°00'00"	157.08	100.00	100.00	7+15.96	8+73.04
C10	45°00'00"	80.45	102.43	42.43	14+18.56	14+99.01



STREET B



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 Reg. No. 19860 Date 04-28-2014

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PRELIMINARY STREET PLAN

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HUNTERS CROSSING  
 LAKE ELMO, MINNESOTA



**GRADING SEQUENCE**

1. INSTALL ROCK CONSTRUCTION ENTRANCE
2. INSTALL PERIMETER SEDIMENT CONTROL DEVICES (SILT FENCE).
3. STRIP TOPSOIL, STOCKPILE AND STABILIZE IN BERM FOR FUTURE SPREADING.
4. DIG TEMPORARY SEDIMENT BASIN, BASIN TO BE 1800 CF/ACRE OF AREA STRIPPED. CLEAN TEMP BASIN ONCE 50% FULL.
5. ALL SOILS WILL BE COMPACTED PER SPECIFICATIONS.
6. MAINTAIN DRAINAGE DURING GRADING OPERATION TO TEMPORARY SEDIMENT BASIN.
7. COMPLETE SITE GRADING PER PLAN.
8. RESPREAD TOPSOIL MAINTAIN A MINIMUM OF 4" DEPTH.
9. MAINTAIN DRAINAGE TO TEMP SEDIMENT BASIN UNTIL NEXT PHASE BEGINS.
10. STABILIZE DENUDE AREAS AND STOCKPILES WITHIN TIME FRAME LISTED IN EROSION PREVENTION PRACTICES

**GENERAL NOTES**

1. THE STORM WATER POLLUTION PREVENTION MANAGER SHALL BE A PERSON TRAINED, KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMP'S WHO WILL OVER SEE THE IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S BEFORE AND DURING CONSTRUCTION.
2. CONTRACTOR TO ADHERE TO ALL REQUIREMENTS OF THE MINNESOTA POLLUTION CONTROL AGENCY N.P.D.E.S. PERMIT, INCLUDING THE REQUIREMENT TO MINIMIZE THE AREA DISTURBED BY GRADING AT ANY GIVEN TIME AND TO COMPLETE TURF RESTORATION WITHIN THE TIME REQUIRED BY THE PERMIT AFTER TEMPORARY CEASING GRADING OR COMPLETION OF GRADING.
3. A COPY OF THESE PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. BMP'S REFER TO EROSION AND SEDIMENT CONTROL PRACTICES DEFINED IN THE MPCA PROTECTING WATER QUALITY IN URBAN AREAS AND THE MINNESOTA CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL PLANNING HANDBOOK.
5. ALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) SHALL BE INSTALLED AND IN OPERATION PRIOR TO LAND DISTURBANCE ACTIVITIES. SOME EROSION CONTROLS SUCH AS CHECK DAMS AND TEMPORARY SILT PONDS MAY BE INSTALLED AS GRADING OCCURS IN THE SPECIFIC AREA. THEY SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR EROSION HAS PASSED.
6. THE BMP'S SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE PERMITTEE SHALL ANTICIPATE THAT MORE BMP'S WILL BE NECESSARY TO ENSURE EROSION AND SEDIMENT CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY CONSTRUCTION ACTIVITIES AND/OR CLIMATIC EVENTS AND TO PROVIDE ADDITIONAL BMP'S OVER AND ABOVE THE MINIMUM REQUIREMENTS SHOWN ON THE PLANS THAT MAY BE NEEDED TO PROVIDE EFFECTIVE PROTECTION OF WATER AND SOIL RESOURCES.
7. ALL TREES NOT LISTED FOR REMOVAL SHALL BE PROTECTED. DO NOT OPERATE EQUIPMENT WITHIN THE DRIP LINE, ROOT ZONES OR WITHIN TREE PROTECTION FENCE AREAS.
8. WHEREVER POSSIBLE, PRESERVE THE EXISTING TREES, GRASS AND OTHER VEGETATIVE COVER TO HELP FILTER RUNOFF.
9. OPERATE TRACK EQUIPMENT (DOZER) UP AND DOWN EXPOSED SOIL SLOPES ON FINAL PASS, LEAVING TRACK GROOVES PERPENDICULAR TO THE SLOPE. DO NOT BACK-BLADE. LEAVE A SURFACE ROUGH TO MINIMIZE EROSION.
10. TEMPORARY SEED SHALL BE DONE IN ACCORDANCE TO MNDOT 2575 & 3876. CONSISTING OF:
  - MN SEED MIX 22-111 @ 40 LBS. PER ACRE OR APPROVED EQUAL.
  - MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED.
  - TYPE 1 FERTILIZER, 10-10-20 @ 200 LBS. PER ACRE
10. PERMANENT TURF RESTORATION SHALL BE DONE IN ACCORDANCE WITH MNDOT 2575 & 3876. CONSISTING OF:
  - MN SEED MIX 25-121 AT 75 POUNDS PER ACRE
  - MULCH SHALL BE MNDOT TYPE 3 @ 2 TONS PER ACRE OR APPROVED EQUAL AND DISK ANCHORED IN PLACE OR APPROVED EQUAL, INSTALLED TO MINIMUM 90% COVERAGE OF THE SURFACE AREA DISTURBED. MULCH AT 90% COVERAGE WITH DISK ANCHOR.
  - TYPE 3 FERTILIZER, 22-5-10 80%W.I.N @ 350 LBS PER ACRE.
11. SLOPES AT 3:1 OR STEEPER, AND/OR WHERE INDICATED ON THE PLANS SHALL BE SEEDED AND HAVE AN EROSION CONTROL BLANKET TYPE 3 INSTALLED OR MAY BE HYDROSEEDED WITH TACKIFIER MULCH.
12. THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS.
13. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.
14. WITHIN 7 DAYS OF COMPLETION OF THE SITE GRADING OPERATIONS THE ENTIRE SITE (EXCEPT ROADWAYS) SHALL HAVE BEEN SEEDED AND MULCHED AND SILT FENCE SHALL BE INSTALLED AROUND ALL PONDS.
15. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
16. THE MINIMIZATION OF SOIL COMPACTION MUST BE USED ON AREAS OUTSIDE OF SPECIFIC COMPACTION REQUIRED AREAS. THESE PRACTICES INCLUDE: PREVENTING HEAVY EQUIPMENT TRAFFIC AND CONSTRUCTION TRAFFIC FROM AREAS, USING PRACTICES TO PREVENT CONCENTRATED FLOW OCCURRING OVER THE SOIL. PROVIDE LIGHT TRACKED EQUIPMENT TO CONSTRUCT AREA TO FINAL GRADE. THE AREAS REQUIRING LOOSE SOIL INCLUDE ALL TOPSOIL PLACEMENT AND INFILTRATION/FILTRATION BASINS.

**CONSTRUCTION ACTIVITY REQUIREMENTS**

**A. EROSION PREVENTION PRACTICES**

1. THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS.
2. TEMPORARY STABILIZATION MUST BE INITIATED IMMEDIATELY WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE, AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
3. ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF A SURFACE WATER OR ANY STORMWATER CONVEYANCE SYSTEM WHICH IS CONNECTED TO A SURFACE WATER MUST BE STABILIZED WITHIN 7 DAYS. THESE AREAS INCLUDE POND SIDE SLOPES, EXPOSED SOIL AREAS WITH A POSITIVE SLOPE TO A CURB AND GUTTER SYSTEM, STORM SEWER INLET, DRAINAGE DITCH, OR OTHER SYSTEM THAT DISCHARGES TO A SURFACE WATER.
4. THE NORMAL WETTED PERIMETER OF ANY DRAINAGE DITCH MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER (WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER).
5. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

**B. SEDIMENT CONTROL PRACTICES**

1. SEDIMENT CONTROL PRACTICES MUST MINIMIZE SEDIMENT ENTERING SURFACE WATERS. DITCHES AND SEDIMENT BASINS REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS. IF DOWN GRADE SYSTEM IS OVERLOADED, ADDITIONAL UPGRADE PRACTICES MUST BE INSTALLED, AND THE SWPPP MUST BE AMENDED. THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER. SLOPES MAY BE BROKEN WITH SILT FENCE, ROCK CHECK DAMS, COMPOST SNAKES, OR OTHER APPROVED METHODS AND/OR AS SHOWN ON THE EROSION CONTROL PLAN.
2. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON DOWNGRADE PERIMETERS BEFORE UPGRADE LAND DISTURBING ACTIVITIES BEGIN.
3. THE TIMING OF SEDIMENT CONTROL PRACTICES MAY BE ADJUSTED TO ACCOMMODATE SHORT TERM ACTIVITIES. HOWEVER, THESE PRACTICES MUST BE INSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.
4. CONTRACTOR MUST PROTECT ALL STORM DRAIN INLETS BY APPROPRIATE BMP'S DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.
5. TEMPORARY STOCKPILES MUST HAVE SILT FENCE AROUND THE PERIMETER OF THE BASE OF THE STOCKPILE AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORM WATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS OR DITCHES.
6. CONTRACTOR MUST INSTALL TEMPORARY (OR PERMANENT) SEDIMENTATION BASINS WHERE TEN OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION AND/OR AS SHOWN ON THE EROSION CONTROL PLAN.

**C. DEWATERING AND SURFACE DRAINAGE**

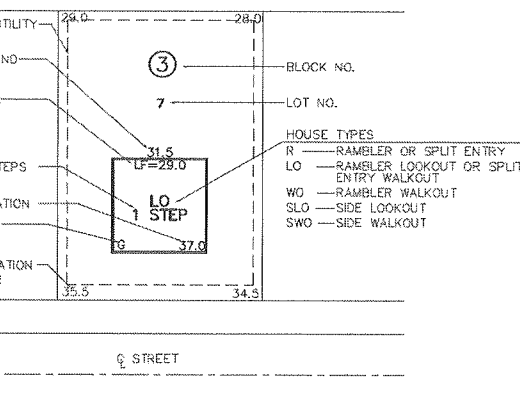
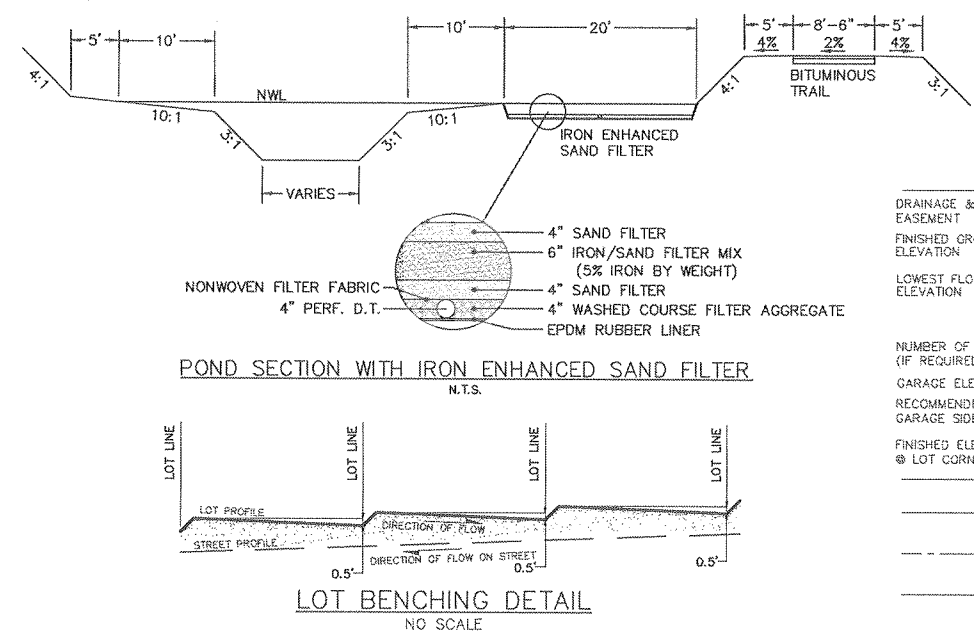
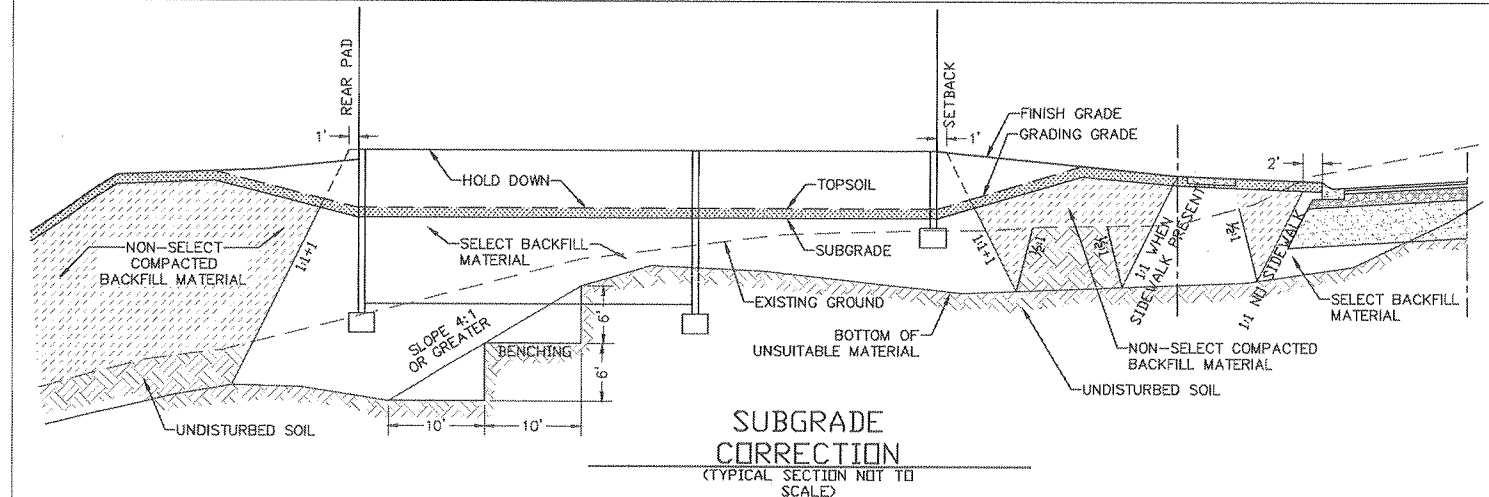
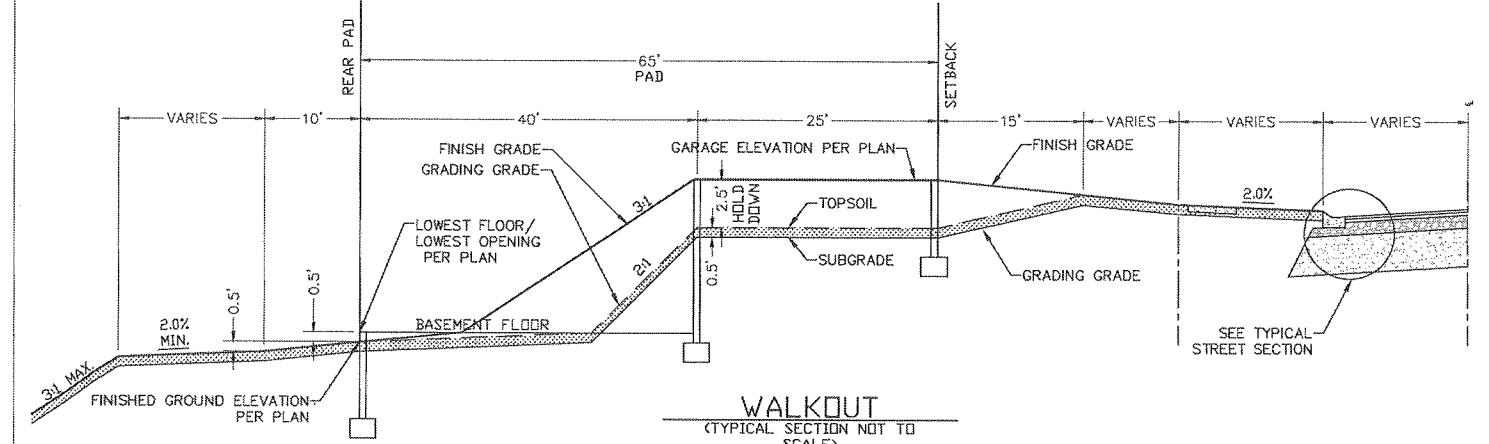
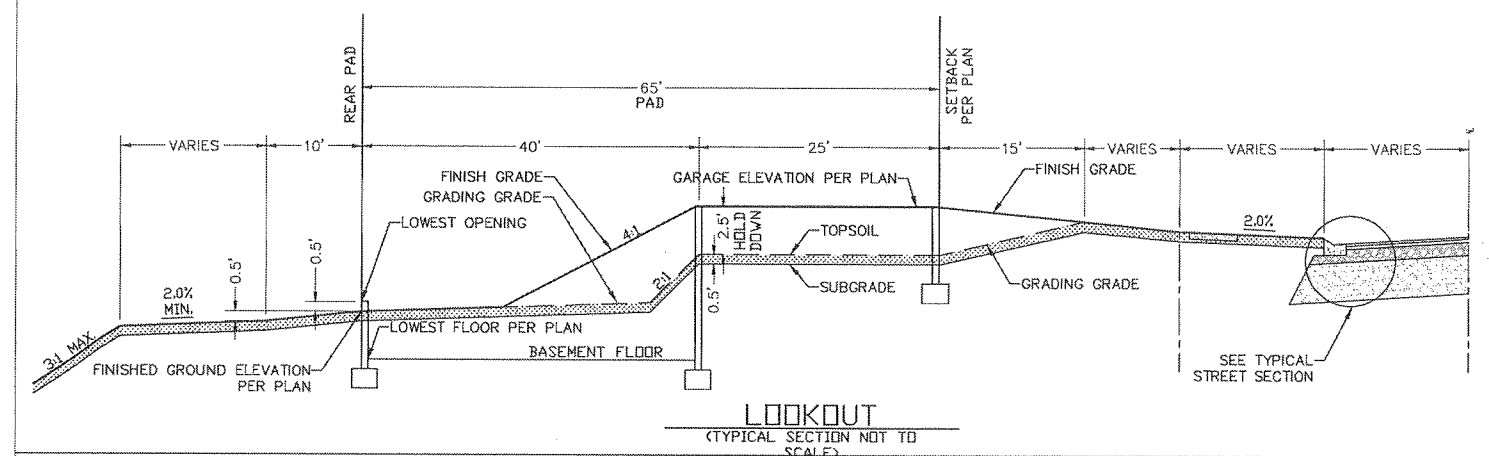
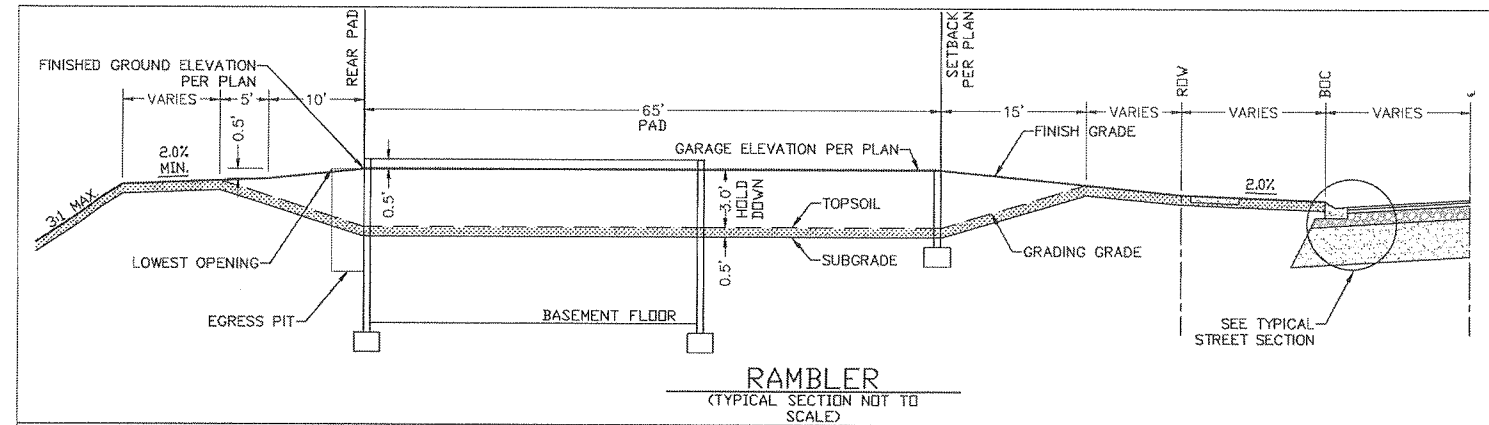
1. DEWATERING OR ANY TYPE OF SURFACE DRAINAGE THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO AN APPROVED SEDIMENT BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIP RAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES.
2. ALL WATER FROM DEWATERING MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION, OR INUNDATION OF WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

**D. INSPECTIONS AND MAINTENANCE**

1. THE CONTRACTOR MUST APPOINT SOMEONE TO INSPECT THE CONSTRUCTION SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF GREATER THAN 0.5 INCHES IN 24 HOURS. ALL INSPECTIONS MUST BE RECORDED IN WRITING AND RETAINED PER M.P.C.A. N.P.D.E.S. REQUIREMENTS. (NOTE: LOCAL JURISDICTION MAY REQUIRE A MORE FREQUENT INTERVAL OF INSPECTION.)
2. ALL NONFUNCTIONAL BMP'S MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH FUNCTIONAL BMP'S BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED. (SEE MPCA NPDES PERMIT I.V.E.5)

**E. POLLUTION PREVENTION MANAGEMENT MEASURES**

1. SOLID WASTE MUST BE DISPOSED OF PER M.P.C.A. REQUIREMENTS.
2. HAZARDOUS MATERIALS MUST BE STORED AND DISPOSED OF PER M.P.C.A. REGULATIONS.
3. EXTERNAL WASHING OF CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED AND WASTE PROPERLY DISPOSED OF. NO ENGINE DECREASING IS ALLOWED ON SITE.



1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND IMPLEMENT MINNESOTA POLLUTION CONTROL AGENCY (MPCA) BEST MANAGEMENT PRACTICES (BMP) TO CONTROL SITE SILTATION AND EROSION INTO DRAINAGE WAYS. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND COMPLETION DATES RELATIVE TO ALL PERMITS ISSUED FOR THE WORK TO BE COMPLETED. THE ENGINEER MAY ISSUE A STOP WORK ORDER FOR ALL DEVELOPMENT WORK AND BUILDING CONSTRUCTION FOR NONCOMPLIANCE WITH THESE MEASURES.
2. SEQUENCING. ALL SILT FENCE AND OTHER EROSION CONTROL MEASURES SHALL BE IN PLACE AND APPROVED BY ENGINEER PRIOR TO ANY REMOVALS, EXCAVATION OR CONSTRUCTION AND SHALL BE MAINTAINED UNTIL VISIBLE TURF OR GROUND COVER HAS BEEN ESTABLISHED AND APPROVED BY THE ENGINEER.
3. SILT FENCE. THE CONTRACTOR SHALL INSTALL SILT FENCE AT THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE CITY STANDARD DETAILS. SILT FENCE DAMS AND INTERIM SUMPS SHALL BE PLACED TO INTERCEPT SILT FROM CONCENTRATED RUNOFF FROM OPEN GRADED AREAS. ADDITIONAL SILT FENCE SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER.
4. STOCKPILES. ALL STOCKPILE AREAS SHALL HAVE SILT FENCE OR SEDIMENT TRAPPING SYSTEMS PLACED AROUND THE ENTIRE PERIMETER.
5. INLET PROTECTION. THE CONTRACTOR SHALL INSTALL INLET PROTECTION ON ALL EXISTING STORM SEWER INLETS IN ACCORDANCE WITH THE CITY STANDARD DETAILS. INLET PROTECTION SHALL ALSO BE PROVIDED ON ALL PROPOSED STORM SEWER INLETS IMMEDIATELY FOLLOWING CONSTRUCTION OF THE INLET. INLET PROTECTION MUST BE INSTALLED IN A MANNER THAT WILL NOT IMPOUND WATER FOR EXTENDED PERIODS OF TIME OR IN A MANNER THAT PRESENTS A HAZARD TO VEHICULAR OR PEDESTRIAN TRAFFIC.
6. TEMPORARY SEDIMENT BASINS. THE CONTRACTOR SHALL INCORPORATE TEMPORARY SEDIMENT BASINS THROUGHOUT THE CONSTRUCTION SITE TO CAPTURE RUNOFF AND SLOW THE FLOW OF WATER AND ALLOW SEDIMENT TO SETTLE OUT. TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED AS DIRECTED BY THE CITY ENGINEER.
7. ROCK CONSTRUCTION ENTRANCE. A ROCK ENTRANCE SHALL BE CONSTRUCTED AND MAINTAINED AS SHOWN ON THE PLAN TO REDUCE TRACKING OF SILT AND DIRT ONTO THE PUBLIC STREETS. A GEOTEXTILE FABRIC SHALL BE PLACED UNDERNEATH THE ROCK. THE ROCK SHALL BE PERIODICALLY REPLENISHED TO MAINTAIN THE INTENDED PERFORMANCE. MUD AND DEBRIS SHALL BE REMOVED OR SCRAPED FROM TIRES AND VEHICLE UNDERCARRIAGE PRIOR TO LEAVING THE SITE.
8. STREET SWEEPING. ALL STREETS USED FOR ACCESS TO THE SITE AND HAUL ROUTES USED FOR CONSTRUCTION EQUIPMENT AND MATERIAL SUPPLIES SHALL BE CLEANED AT THE END OF EACH WORKING DAY. THE CITY OR ENGINEER MAY ORDER ADDITIONAL SWEEPING OF THE STREETS AS DEEMED REQUIRED AT DEVELOPER/CONTRACTOR EXPENSE.
9. POSITIVE DRAINAGE AND PROTECTION. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGHOUT THE SITE AT ALL TIMES. LOW POINTS WITHIN AND ALONG ROADWAYS ARE EXPRESSLY PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DITCHES, PIPING OR OTHER MEANS TO FACILITATE PROPER DRAINAGE DURING CONSTRUCTION. TO PROTECT PREVIOUSLY GRADED AREAS FROM EROSION, WOOD FIBER BLANKET SHALL BE PLACED IMMEDIATELY ON STEEP SLOPES (1:3 OR GREATER) AND EMBANKMENTS, PERMANENT AND TEMPORARY PONDS, AND OUTLETS AND OVERFLOWS TO PROTECT THE COMPLETED GRADE AND MINIMIZE SILT IN THE RUNOFF.

STANDARD PLAN NOTES  
GRADING AND EROSION CONTROL PLANS

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	600A
		LAKE ELMO	

10. DRAINAGE DITCHES. THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. STABILIZATION OF THE LAST 200 LINEAL FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER. STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES MUST BE COMPLETED WITHIN 4 DAYS AFTER CONNECTING TO A SURFACE WATER AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM (WITH PROPERLY DESIGNED ROCK DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.
11. TURF ESTABLISHMENT. ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
12. MAINTENANCE AND INSPECTION. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND UNTIL SATISFACTORY ESTABLISHMENT OF PERMANENT GROUND COVER IS OBTAINED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, AND STORMWATER OUTFALLS MUST BE INSPECTED WEEKLY, AND WITHIN 24 HOURS OF THE SITE RECEIVING 0.5 INCHES OF RAIN. REPAIRS MUST BE MADE ON THE SAME DAY OR FOLLOWING DAY OF THE INSPECTION. UNSATISFACTORY CONDITIONS NOT REPAIRED OR CLEANED UP WITHIN 48-HOURS OF NOTIFICATION SHALL RESULT IN A STOP WORK ORDER, AND/OR SAID WORK SHALL BE COMPLETED AT CONTRACTOR'S EXPENSE.
13. REMOVAL. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TEMPORARY EROSION CONTROL MEASURES, STRUCTURES AND DEVICES ONLY AFTER RECEIVING ENGINEER APPROVAL. ALL DEBRIS, STAKES, AND SILTS ALONG SILT FENCES SHALL BE REMOVED AND DISPOSED OFF SITE. THE CONTRACTOR SHALL HAND RAKE SILTED AREAS ALONG THE FENCE LOCATIONS TO PROVIDE A SMOOTH FINAL GRADE AND SHALL RESTORE THE GROUND SURFACE WITH SEED OR SOD, AS REQUIRED, TO MATCH THE FINISHED GRADE TO THE ADJACENT AREA.
14. FINAL STORM SEWER SYSTEM. AT THE COMPLETION OF THE WORK AND BEFORE THE FINAL WALK THROUGH, THE CONTRACTOR SHALL REMOVE STORM SEWER INLET PROTECTION MEASURES AND THOROUGHLY FLUSH THE STORM SEWER SYSTEM. SEDIMENT AND DEBRIS SHALL BE COMPLETELY REMOVED AND CLEANED AT THE INLETS, OUTLETS, AND DOWNSTREAM OF EACH OUTLET. RIPRAP AND GEOTEXTILE FABRIC MAY REQUIRE REPLACEMENT AS DIRECTED BY THE ENGINEER TO OBTAIN A LIKE NEW INSTALLATION ACCEPTABLE TO THE CITY.
15. DITCH CHECK (BIOROLL BLANKET SYSTEM). BIOROLL AND BLANKET SYSTEMS SHALL BE INSTALLED AS DITCH CHECKS ONLY IN SPECIFIED LOCATIONS AS APPROVED BY THE CITY ENGINEER. BIOROLLS ARE NOT TO BE UTILIZED IN AREAS WHERE VEHICLE AND CONSTRUCTION TRAFFIC OCCUR.

STANDARD PLAN NOTES  
GRADING AND EROSION CONTROL PLANS

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	600B
		LAKE ELMO	

16. FLOTATION SILT CURTAIN. FLOTATION SILT CURTAIN SHALL BE UTILIZED WHEN CONSTRUCTION ACTIVITIES OCCUR DIRECTLY ADJACENT TO LAKES, STREAMS OR WETLANDS IN ORDER TO CONTAIN SEDIMENTS NEAR THE BANKS OF WORKING AREAS. THE INSTALLATION OF FLOTATION SILT CURTAINS WILL BE REQUIRED AS DIRECTED BY THE CITY ENGINEER.
17. CONCRETE WASHOUT ONSITE. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER THAT DOES NOT ALLOW WASHOUT LIQUIDS TO ENTER GROUND WATER IS CONSIDERED AN IMPERMEABLE LINER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.

STANDARD PLAN NOTES  
GRADING AND EROSION CONTROL PLANS

FEBRUARY 2013

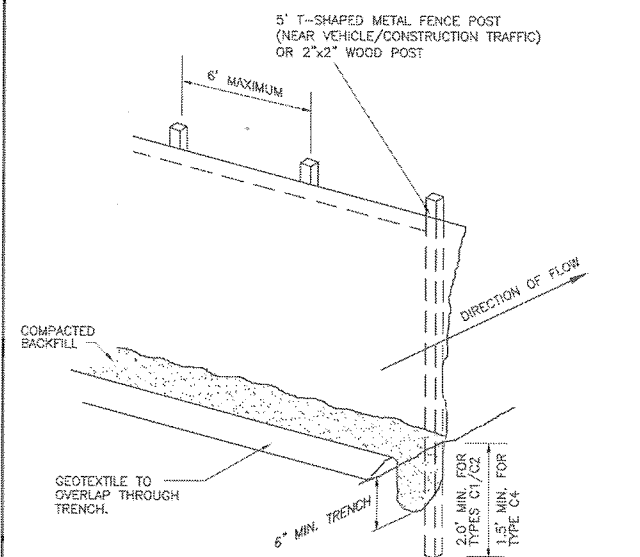
	CITY OF LAKE ELMO	STANDARD DRAWING NO.	600C
		LAKE ELMO	

1. RESTORE ALL DISTURBED AREAS WITH 6 INCHES OF TOPSOIL CONFORMING TO MNDOT 3B77.
2. PROTECT ALL STORM SEWER INLETS AS SPECIFIED HEREIN AND MAINTAIN UNTIL STREET CONSTRUCTION IS COMPLETED.
3. MAINTAIN ALL SILT FENCE AND REPAIR OR REPLACE AS NEEDED OR REQUIRED UNTIL TURF HAS BEEN ESTABLISHED.
4. RESTORATION WORK SHALL BEGIN WITHIN 7 DAYS OF FINAL GRADING.
5. A MINIMUM OF 2 ROWS OF SOD SHALL BE PLACED ADJACENT TO THE BACK OF CURBS ALONG ALL BOULEVARDS. SILT FENCE SHALL BE PLACED DIRECTLY BEHIND THE SOD IN ACCORDANCE WITH THE CITY STANDARD DETAILS.
6. BOULEVARD AND DITCH RESTORATION INCLUDES FINE GRADING, WHICH INCLUDES THE REMOVAL OF ROCKS, DEBRIS AND SOIL CHUNKS, WHILE MAINTAINING POSITIVE DRAINAGE.

STANDARD PLAN NOTES  
SITE RESTORATION PLANS

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	600D
		LAKE ELMO	

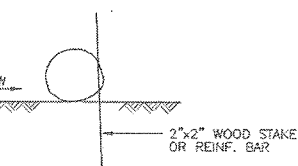
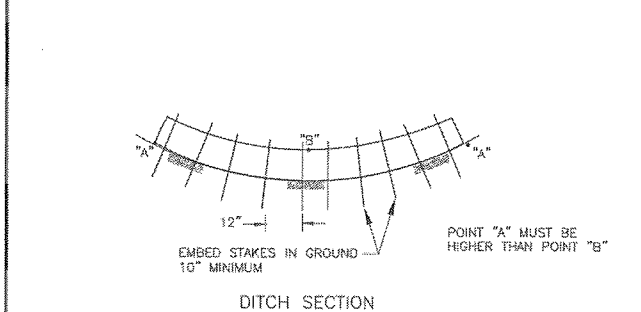


NOTE: -SILT FENCE INSTALLATION SHALL CONFORM TO MNDOT 2573.3, TYPE C1/C2 NEAR VEHICLE/CONSTRUCTION TRAFFIC, TYPE C4 AT ALL OTHER LOCATIONS.  
-MATERIALS SHALL CONFORM TO MNDOT 3886.

SILT FENCE

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	601
		LAKE ELMO	

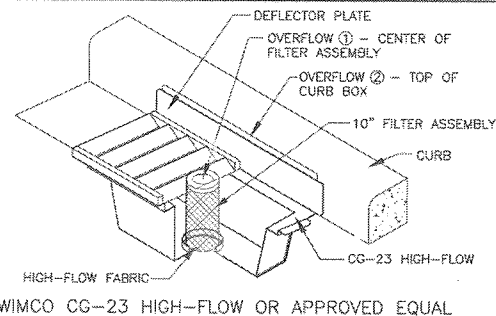
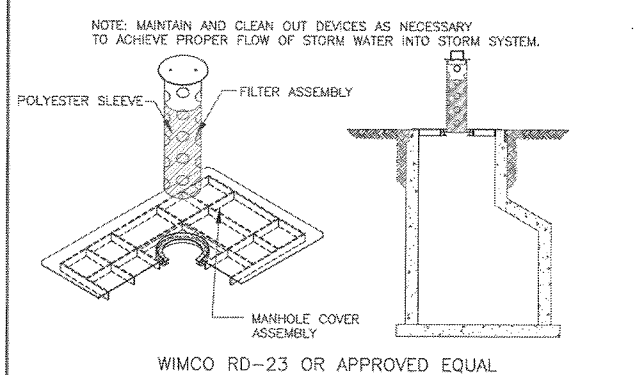


DITCH CHECK (FIBER ROLL)

NOTE: STAKE TO BE INSTALLED AT AN ANGLE OF APPROXIMATELY 45° ON THE DOWNSTREAM SIDE OF THE FIBER ROLL. ENSURE THAT STAKE DOES NOT PUSH DOWN THE FIBER ROLL FROM ITS FULL HEIGHT.

FEBRUARY 2013

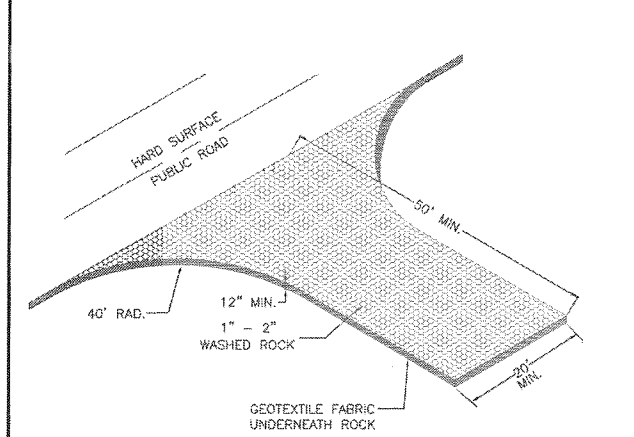
	CITY OF LAKE ELMO	STANDARD DRAWING NO.	603
		LAKE ELMO	



SEDIMENT CONTROL AROUND STORM SEWER INLET

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	604
		LAKE ELMO	

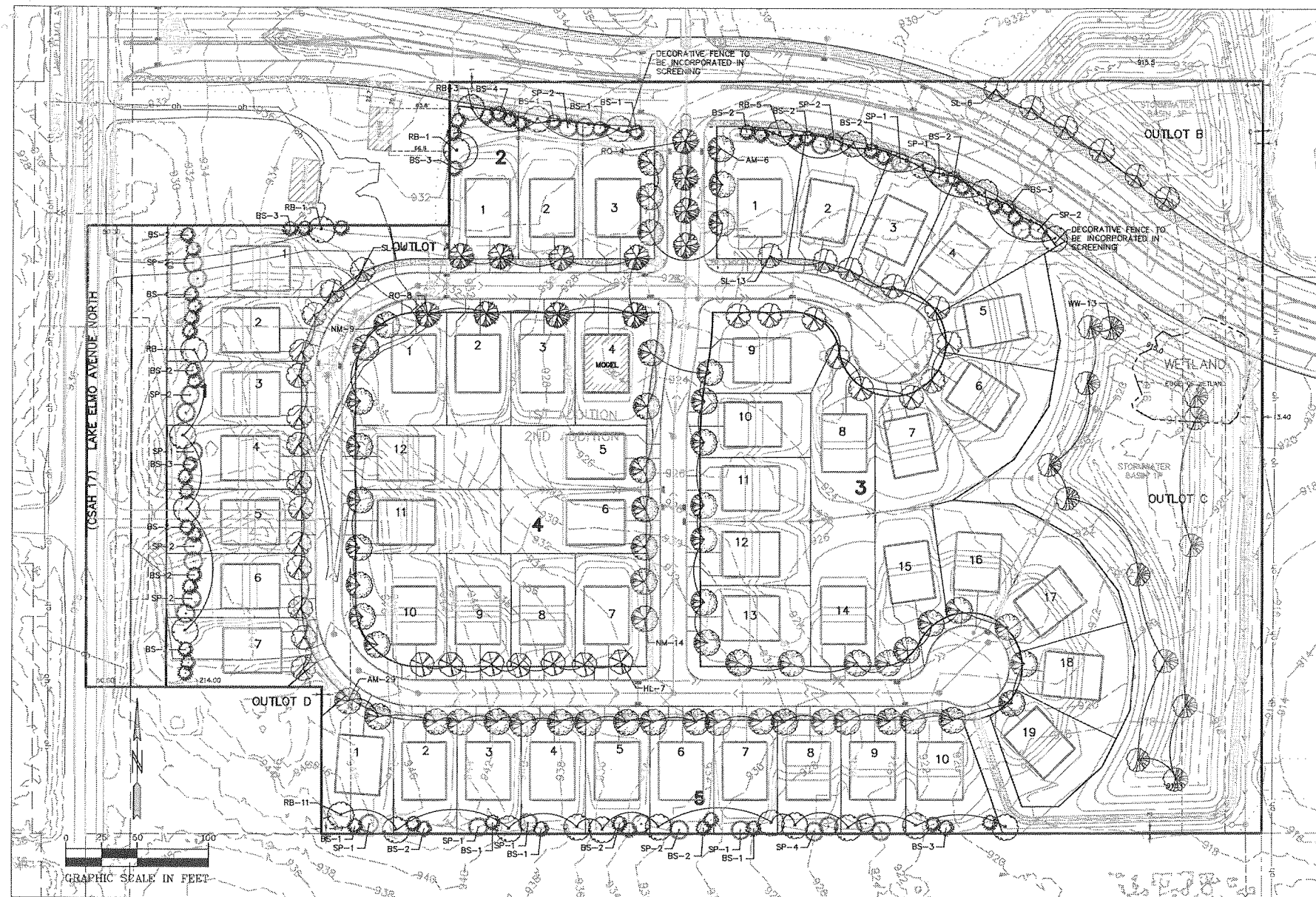


- NOTES:
1. MAXIMUM WIDTH OF CONSTRUCTION ENTRANCE IS 24 FEET.
  2. A MNDOT 3733 TYPE V GEOTEXTILE FABRIC SHALL BE USED UNDER THE ROCK TO PREVENT MIGRATION OF THE UNDERLYING SOIL INTO THE STONE.
  3. CONSTRUCTION ENTRANCE IS REQUIRED FOR ALL NEW HOME CONSTRUCTION AND NEW STREET CONSTRUCTION.
  4. CONSTRUCTION ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OF MUD ONTO ROADWAYS THAT ADJOIN THE PROJECT. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ROCK ENTRANCE.
  5. REMOVE MUD AND DEBRIS FROM TIRES AND VEHICLE UNDERCARRIAGE PRIOR TO LEAVING THE SITE.

ROCK CONSTRUCTION ENTRANCE

FEBRUARY 2013

	CITY OF LAKE ELMO	STANDARD DRAWING NO.	605
		LAKE ELMO	



KEY	COMMON NAME/SCIENTIFIC NAME	ROOT	QUANTITY
OVERSTORY TREES			
AM	AUTUMN BLAZE MAPLE/ACER X FREEMANI 'AUTUMN BLAZE'	2.5" B&B	35
SL	SENTRY LINDEN/TILIA AMERICANA 'SENTRY'	2.5" B&B	33
HL	THORNLESS HONEYLOCUST/GLEDITSIA TRACANTHOS VAR INERMIS	2.5" B&B	7
RB	RIVER BIRCH/BETULA NIGRA	10' B&B	25
NM	NORTHWOODS RED MAPLE/ACER RUBRUM	2.5" B&B	23
RO	RED OAK/QUERCUS RUBRA	2.5" B&B	12
WW	WHITE WILLOW/SALIX ALBA 'NIOBE'	2.5" B&B	13
EVERGREEN TREES			
BS	BLACK HILLS SPRUCE/PICEA GLAUCA DENSATA	6' B&B	55
SP	SCOTCH PINE/PINUS SYLVESTRUS	6' B&B	27

**LANDSCAPE REQUIREMENTS:**

- ONE TREE TO BE PLANTED FOR EVERY FIFTY FEET OF STREET FRONTAGE.  
TOTAL PROPOSED STREET FRONTAGE: 2,440 LINEAR FT /50 = 48.8X2=97.6  
REQUIRED TREES: 98 TREES (EQUAL TO 245")
- FIVE TREES TO BE PLANTED FOR EVERY ONE ACRE OF LAND THAT IS BEING DEVELOPED.  
TOTAL AREA: 21.5 ACRES (EXCLUDING 5TH STREET ROW)  
REQUIRED TREES: 108 TREES (EQUAL TO 270")

**MITIGATION REQUIREMENTS (SEE TREE PRESERVATION PLAN FOR MORE DETAIL):**

TOTAL INCHES: 2,106"  
 ALLOWED 30% REMOVAL: 631"  
 TOTAL INCHES REMOVED: 1,677  
 TOTAL INCHES TO MITIGATE: 1,046"  
 COMMON TREE REMOVAL: 1,018"  
 CONIFEROUS TREE REMOVAL: 12"  
 HARDWOOD TREE REMOVAL: 16"

REPLACE COMMON TREES AT A RATE OF 1/4 TOTAL INCHES REMOVED: 1,018"/4=255"  
 REPLACE CONIFEROUS TREES AT A RATE OF 1/2 TOTAL INCHES REMOVED: 12"/2=6"  
 REPLACE HARDWOOD TREES AT A RATE OF 1/2 TOTAL INCHES REMOVED: 16"/2=8"

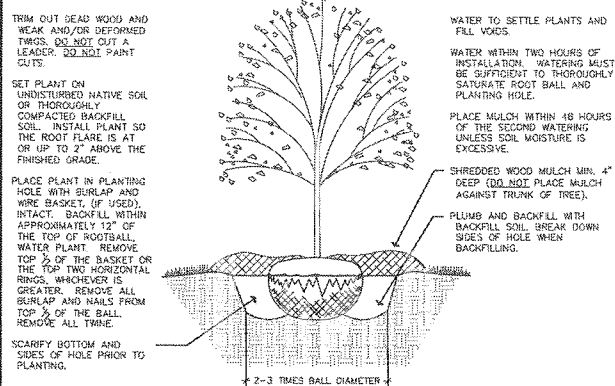
TOTAL INCHES REQUIRED: 269"

**LANDSCAPE SUMMARY:**

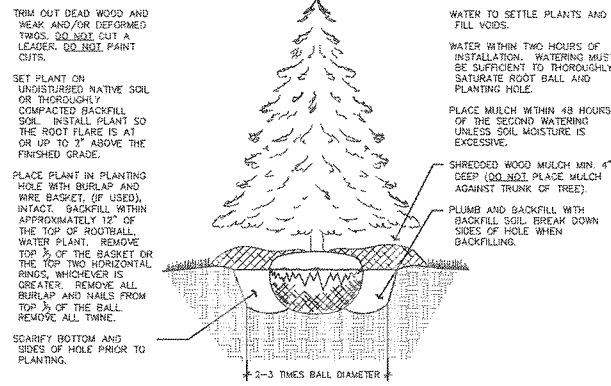
TOTAL TREES REQUIRED:  
 STREET FRONTAGE REQUIREMENT: 98 (245")  
 DEVELOPED ACREAGE REQUIREMENT: 108 (270")  
 MITIGATION: (269")  
**TOTAL INCHES REQUIRED: (515")**  
 \*DEVELOPED ACREAGE REQUIREMENT USED TOWARD MITIGATION REQUIREMENT.

TOTAL TREES PROPOSED:  
 DECIDUOUS: 128 (320")  
 EVERGREEN: 82 (246")  
 TOTAL: 289 (566")

**DECIDUOUS TREE PLANTING DETAIL**



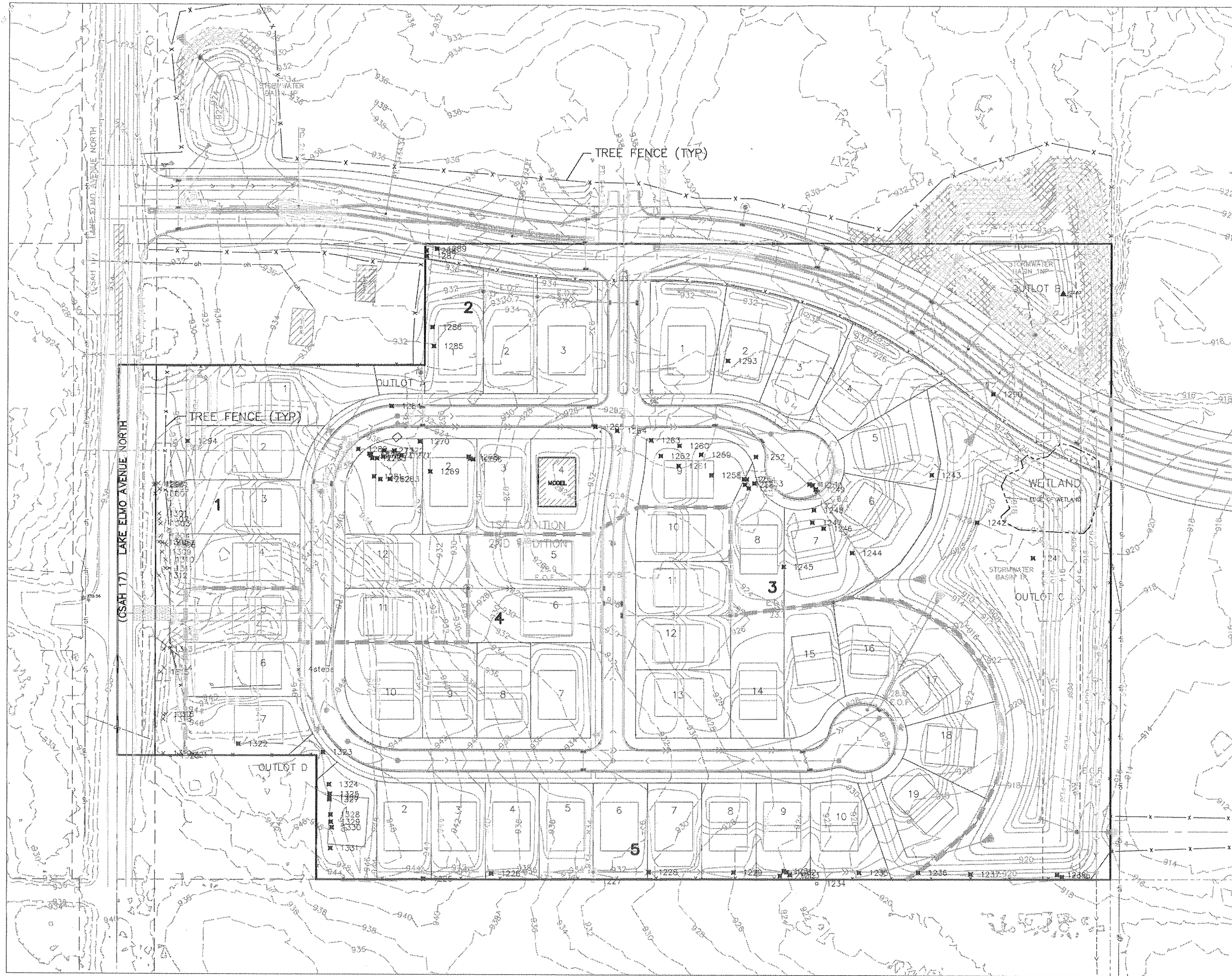
**CONIFEROUS TREE PLANTING DETAIL**



**LANDSCAPE NOTES**

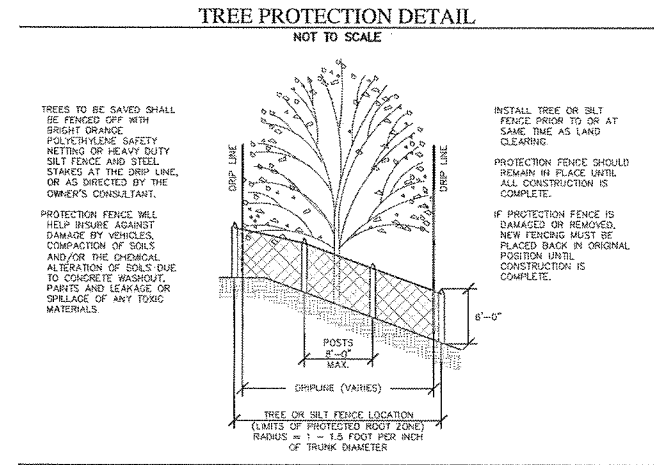
- THE LANDSCAPE CONTRACTOR SHALL VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF PROPOSED PHYSICAL START DATE AT LEAST 7 DAYS IN ADVANCE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL EXISTING UTILITY LOCATIONS ON THE PROJECT SITE WITH Gopher State One Call. 1-800-250-1119 FROM TO COMMENCING WORK. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF EXISTING UTILITIES DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
- GRADING TO BE PERFORMED BY OTHERS.
- NO PLANT MATERIAL SHALL BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL PLANT MATERIAL SHALL MEET THE STANDARDS FOUNDED IN THE AMERICAN ASSOCIATION OF NURSERYMEN-AMERICAN STANDARD FOR NURSERY STOCK.
- ALL CONTAINER MATERIAL TO BE GROWN IN THE CONTAINER A MINIMUM OF SIX (6) MONTHS PRIOR TO PLANTING ON SITE.
- DECIDUOUS AND CONIFEROUS TREES SHALL NOT BE STAKED, BUT THE LANDSCAPE CONTRACTOR MUST GUARANTEE STABILITY TO A WIND SPEED OF 50 M.P.H.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM GUARANTEE OF ONE YEAR ONE TIME REPLACEMENT ON NEW PLANT MATERIALS. GUARANTEE SHALL BE AGREED UPON BY DEVELOPER/BUILDER AND LANDSCAPE CONTRACTOR.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING OR AFTER INSTALLATION.
- IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER SHOWN ON THE PLANT LIST, THE NUMBER SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE WORK SHOWN ON THE PLAN. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES SHOWN ON THE PLANT SCHEDULE.
- COMMERCIAL GRADE POLY LAWN EDGING SHALL BE INSTALLED WHERE NOTED.
- THE LANDSCAPE CONTRACTOR SHALL REPAIR ALL DAMAGE TO THE SITE CAUSED BY THE PLANTING OPERATION AT NO COST TO THE OWNER.
- THE LANDSCAPE CONTRACTOR SHALL KEEP PAVEMENTS CLEAN UNSTAINED. ALL PEDESTRIAN AND VEHICLE ACCESS TO BE MAINTAINED THROUGHOUT CONSTRUCTION PERIOD. ALL WASTES SHALL BE PROMPTLY REMOVED FROM THE SITE. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS AND PERMITS GOVERNING THE WORK.
- STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.





Total Inches: 2,106"
Allowed 30% Removal: 631"
Total Inches Removed: 1,677"
Total Inches to Mitigate: 1,046"
Common Tree Removal: 1,018"
Coniferous Tree Removal: 12"
Hardwood Tree Removal: 16"
Common Tree Removal: 1,018"
Replace at a rate of 1/4: 1,018"/4=255"
Coniferous Tree Removal: 12"
Replace at a rate of 1/2: 12"/2=6"
Hardwood Tree Removal: 16"
Replace at a rate of 1/2: 16"/2=8"
Total Inches Required: 269"

SEE DOCUMENT TITLED "HUNTERS CROSSING TREE INVENTORY"  
FOR A DETAILED TREE INVENTORY  
SEE SHEET L1 FOR LANDSCAPE PLAN



- X 1245 = TREE TO BE SAVED
- ⊠ 1245 = TREE TO BE REMOVED
- 1245 = TREE LOCATED OFFSITE

