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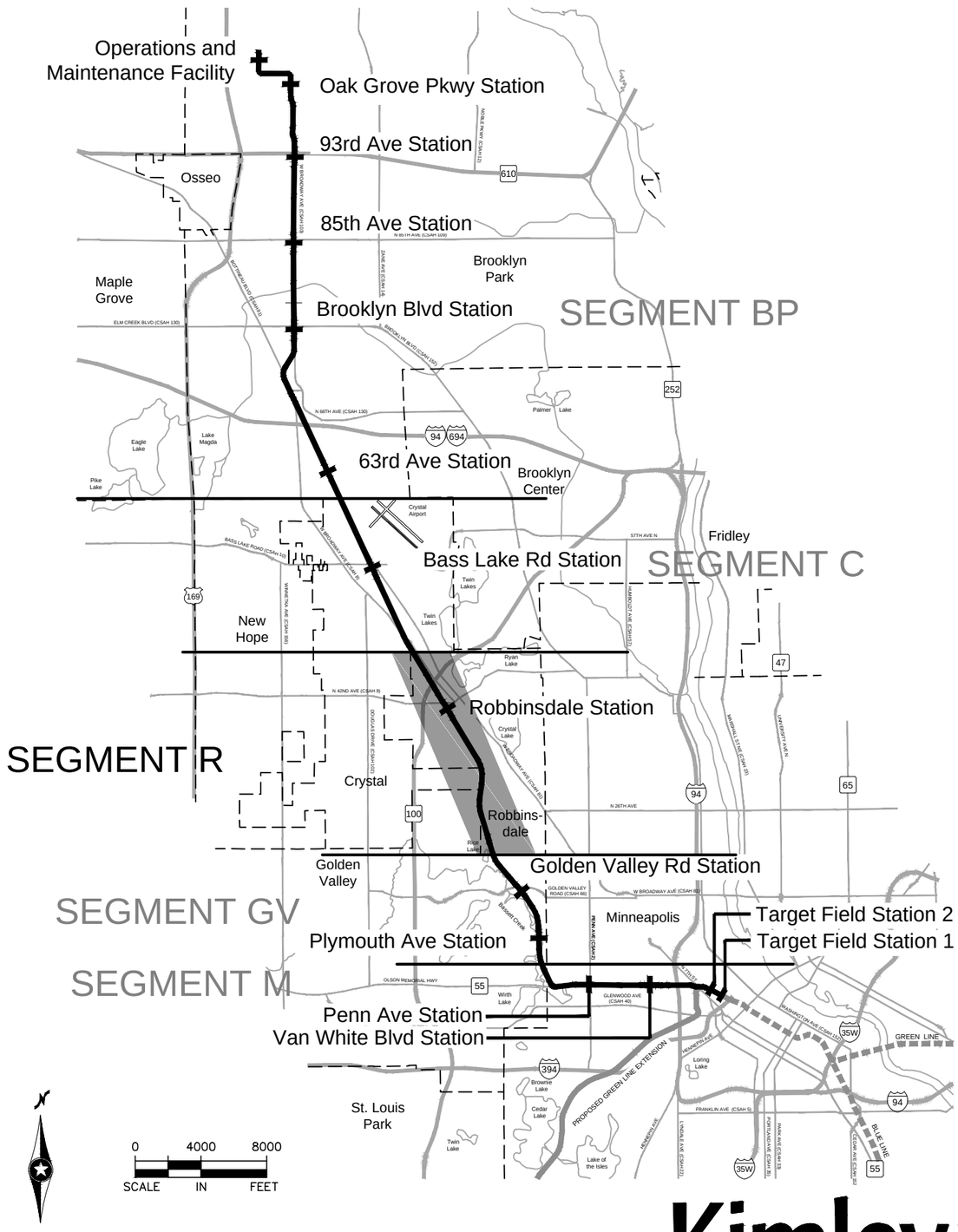

METRO BLUE LINE EXTENSION
Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R

EXISTING CONDITIONS/TRACK/CIVIL
MUNICIPAL CONSENT (12/15/2015)

MN STATE STATUTE 473.3994

INDEX

GENERAL
1 COVER SHEET AND INDEX OF DRAWINGS
2 LEGEND AND ABBREVIATIONS

EXISTING CONDITIONS
3-4 SHEET LAYOUT INDEX
5-32 PLAN SHEETS

TRACK
33-34 SHEET LAYOUT INDEX
35-57 TYPICAL SECTIONS
58-78 PLAN AND PROFILE

CIVIL
79-80 SHEET LAYOUT INDEX
81-83 TYPICAL SECTIONS
84-90 PLAN AND PROFILE
91-92 SITE PLAN

ARCHITECTURE
93 TYPICAL CENTER PLATFORM PLAN

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TOPOGRAPHIC SYMBOLS

- CATCH BASIN
- STORM MANHOLE
- FLARED END SECTION
- BOX CULVERT INVERT
- SANITARY MANHOLE
- SANITARY CLEANOUT
- WATER MANHOLE
- WATER GATE VALVE MANHOLE
- WATER VALVE
- WATER METER
- CORP STOP
- HYDRANT
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- ELECTRIC PANEL
- ELECTRIC MANHOLE
- ELECTRIC BOX
- ELECTRIC VAULT
- GAS VALVE
- GAS METER
- TRAFFIC SIGNAL POLE
- LIGHT POLE
- HAND HOLE (STRUCTURE)
- CABLE TELEVISION
- COMMUNICATION STRUCTURE
- TELEPHONE STRUCTURE
- TELEPHONE MANHOLE
- FIBER OPTIC MANHOLE
- UTILITY POLE
- UTILITY POLE W/LIGHT
- GUY WIRE
- SHRUB
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- CAMERA
- MONITOR WELL
- BOLLARD
- SIGN
- MAILBOX
- FLAG POLE
- UNIDENTIFIED STRUCTURE
- EXISTING DIRECTIONAL LANE USE
- EXISTING SIGNALIZED INTERSECTION
- SURVEY CONTROL STATION
- POWER TOWER
- GATE ARM
- RAIL SIGNAL FLASHER

EXISTING LINETYPES

- P-OH — OVERHEAD ELECTRIC
- P-UG — UNDERGROUND ELECTRIC
- T-OH — OVERHEAD TELEPHONE
- TEL — UNDERGROUND TELEPHONE
- COM-OH — OVERHEAD COMMUNICATION
- COM-UG — UNDERGROUND COMMUNICATION
- CABLE-OH — OVERHEAD CABLE TELEVISION
- CATV — UNDERGROUND CABLE TELEVISION
- FIB-OPT — UNDERGROUND FIBER OPTIC
- FUEL-UG — UNDERGROUND FUEL
- GAS-UG — UNDERGROUND GAS
- GAS(AB.) — ABANDONED UTILITY
- WATER
- SANITARY SEWER
- SANITARY FORCE MAIN
- STORM SEWER
- LARGE CULVERT
- EDGE OF PAVEMENT
- CURB AND GUTTER
- FENCE
- GUARDRAIL
- WALK
- BUILDING
- RETAINING WALL
- BRIDGE
- RIGHT-OF-WAY
- PROPERTY LINE
- FREIGHT RAIL
- CENTERLINE OF TRAIL
- VEGETATION
- WATER BODY

TRACK/CIVIL LINETYPES

- ROADWAY ℄
- TRACK ℄
- CONCRETE CURB AND GUTTER
- BIKE LANE
- SIDEWALK/TRAIL
- DRIVEWAY
- BRIDGE
- SAWCUT
- BALLAST CURB
- RETAINING WALL
- CROSSWALK
- MEDIAN NOSE

CIVIL SYMBOLS

- ACCESSIBLE PEDESTRIAN CURB RAMP (DESIGN VARIES)
- PROPOSED SIGNALIZED INTERSECTION
- PROPOSED DIRECTIONAL LANE USE
- HANDICAP PARKING STALL
- BIKE LANE
- TACTILE WARNING STRIP

TRACK SYMBOLS

- AUTOMATIC GATE
- RAIL TURNOUT
- RAIL CROSSOVER (DOUBLE)
- RAIL CROSSOVER (SINGLE)
- POINT OF SWITCH (PS)
- 2-20 — RAILROAD CURVE NUMBER

SURVEY NOTES

1. THE HORIZONTAL DATUM OF THIS MAP IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM WHICH IS RELATED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM NAD83 (2007 ADJUSTMENT) SOUTH ZONE.
2. THE VERTICAL DATUM OF THIS MAP IS NAVD 88.
3. THE PLANIMETRIC FEATURES SHOWN ON THIS MAP ARE AS PREPARED BY AERO-METRIC, INC. FROM AERIAL DATA AND IMAGERY COLLECTED IN SPRING 2008 AND OCTOBER 2010, AS SUPPLEMENTED BY FIELD SURVEYS COMPLETED BY SAMBATEK.

ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE	OCS	OVERHEAD CONTACT SYSTEM
AVE	AVENUE	OH	OVERHEAD
BGN	BEGIN	OMH	OLSON MEMORIAL HIGHWAY
BIT	BITUMINOUS	PC	POINT OF CURVE
BVCE	BEGININNING VERTICAL CURVE ELEVATION	PGL	PROFILE GRADE LINE
BVCS	BEGINNING VERTICAL CURVE STATION	PITO	POINT OF INTERSECTION TURNOUT
BLVD	BOULEVARD	PKWY	PARKWAY
BNSF	BNSF RAILWAY	POT	POINT ON TANGENT
BRT	BUS RAPID TRANSIT	PROP	PROPOSED
C&G	CURB AND GUTTER	PS	POINT OF SWITCH
℄	CENTERLINE	PT	POINT OF TANGENT
CONC	CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
CP	CANADIAN PACIFIC	R	RADIUS (FEET)
CR	COUNTY ROAD	r	RATE OF CHANGE VERTICAL CURVE
CS	CURVE TO SPIRAL	RD	ROAD
CSAH	COUNTY STATE AID HIGHWAY	RH	RIGHT HAND
CT	COURT	ROW	RIGHT OF WAY
DF	DIRECT FIXATION	S	SOUTH
DR	DRIVE	SB	SOUTHBOUND
Ea	ACTUAL SUPERELEVATION (INCHES)	SC	SPIRAL TO CURVE
EB	EAST BOUND	SIG-COMM	SIGNAL COMMUNICATION
ELEV	ELEVATION	S/P	STOCKPILE
Eu	UNBALANCED SUPERELEVATION (INCHES)	SPI	SPIRAL POINT OF INTERSECTION
EVCE	ENDING VERTICAL CURVE ELEVATION	ST	STREET
EVCS	ENDING VERTICAL CURVE STATION	ST	SPIRAL TO TANGENT
EX	EXISTING	STA	STATION
HCRRA	HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY	SWLRT	SOUTHWEST LRT
HWL	HIGH WATER LINE	TERR	TERRACE
LH	LEFT HAND	TH	TRUNK HIGHWAY
LN	LANE	TOR	TOP OF RAIL
Ls	SPIRAL LENGTH (FEET)	TPSS	TRACTION POWER SUBSTATION
MIN	MINIMUM	TRK	TRACK
MPLS	CITY OF MINNEAPOLIS	TS	TANGENT TO SPIRAL
MPRB	MINNEAPOLIS PARK AND RECREATION BOARD	TWRP	THEODORE WIRTH REGIONAL PARK
N	NORTH	TYP	TYPICAL
NB	NORTHBOUND	UG	UNDERGROUND
NHCC	NORTH HENNEPIN COMMUNITY COLLEGE	Vd	DESIGN VELOCITY (MPH)
NO	NUMBER	WB	WEST BOUND
NWL	NORMAL WATER LINE	100-YR	WATER ELEVATION DURING 100-YEAR EVENT

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METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R

GENERAL

LEGEND AND ABBREVIATIONS

DISCIPLINE: GENERAL

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SHEET 2 OF 93

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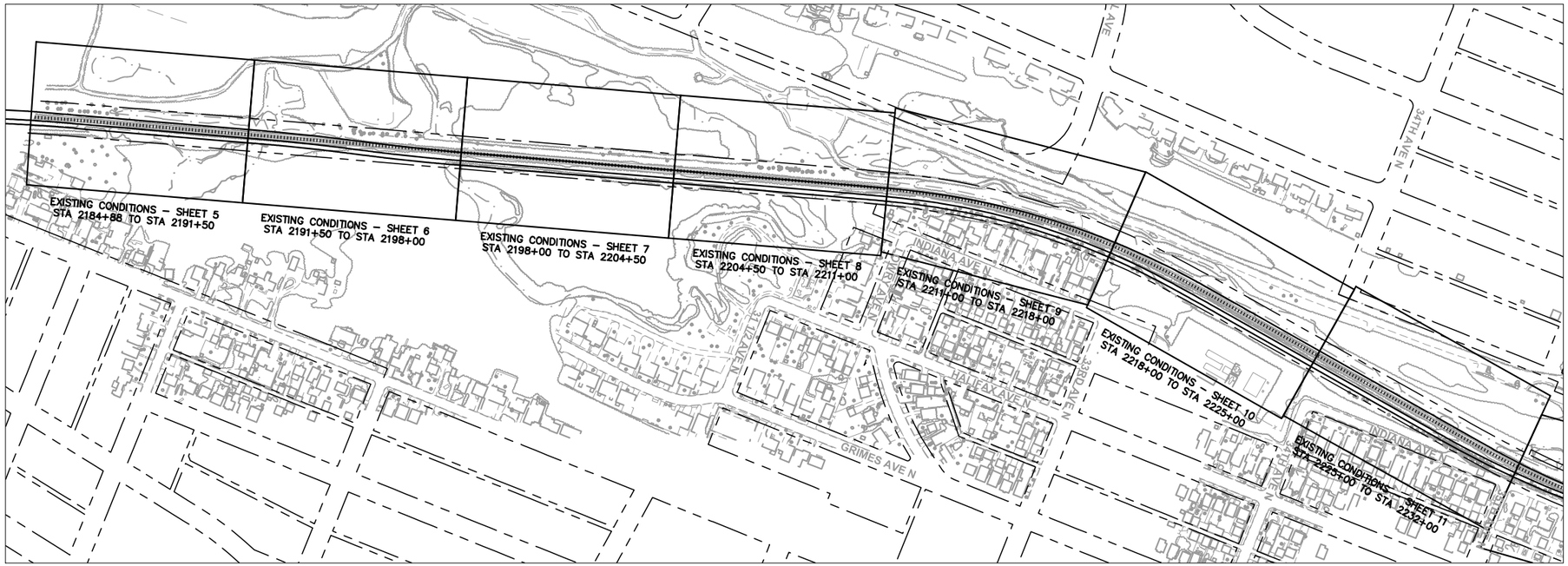

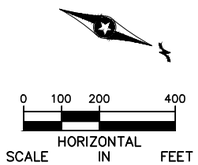

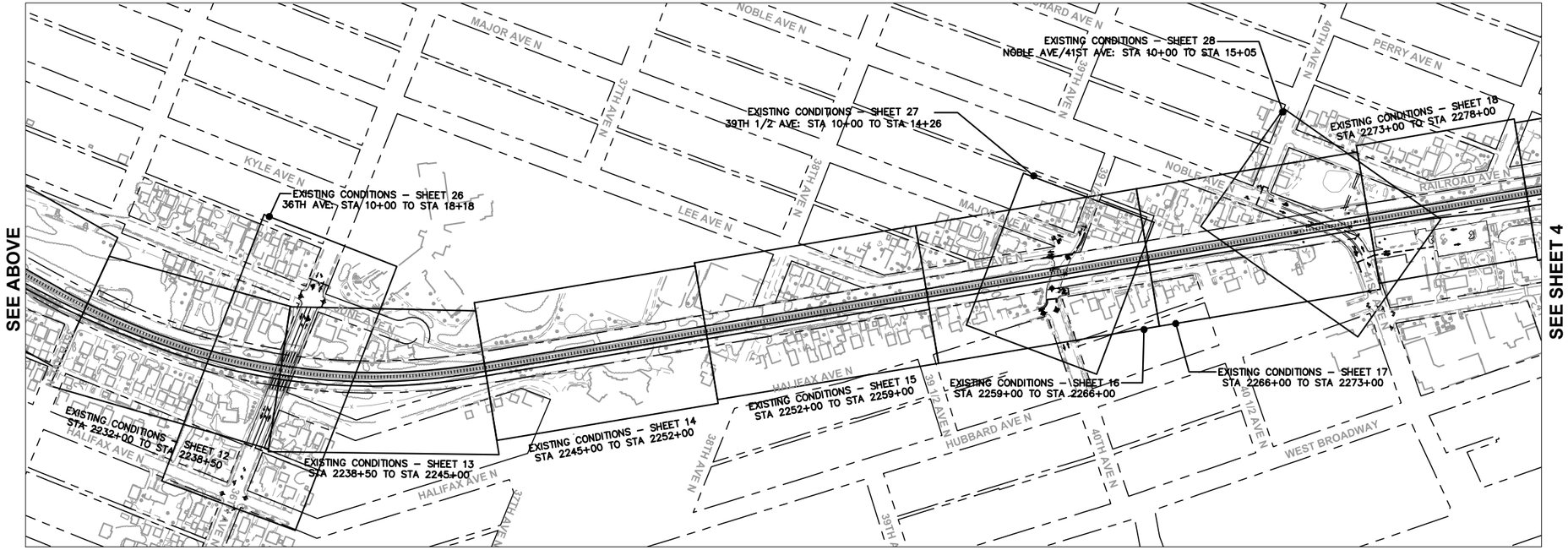

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Bottineau LRT

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SEGMENT R
EXISTING CONDITIONS
SHEET LAYOUT INDEX

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SHEET 3 OF 93

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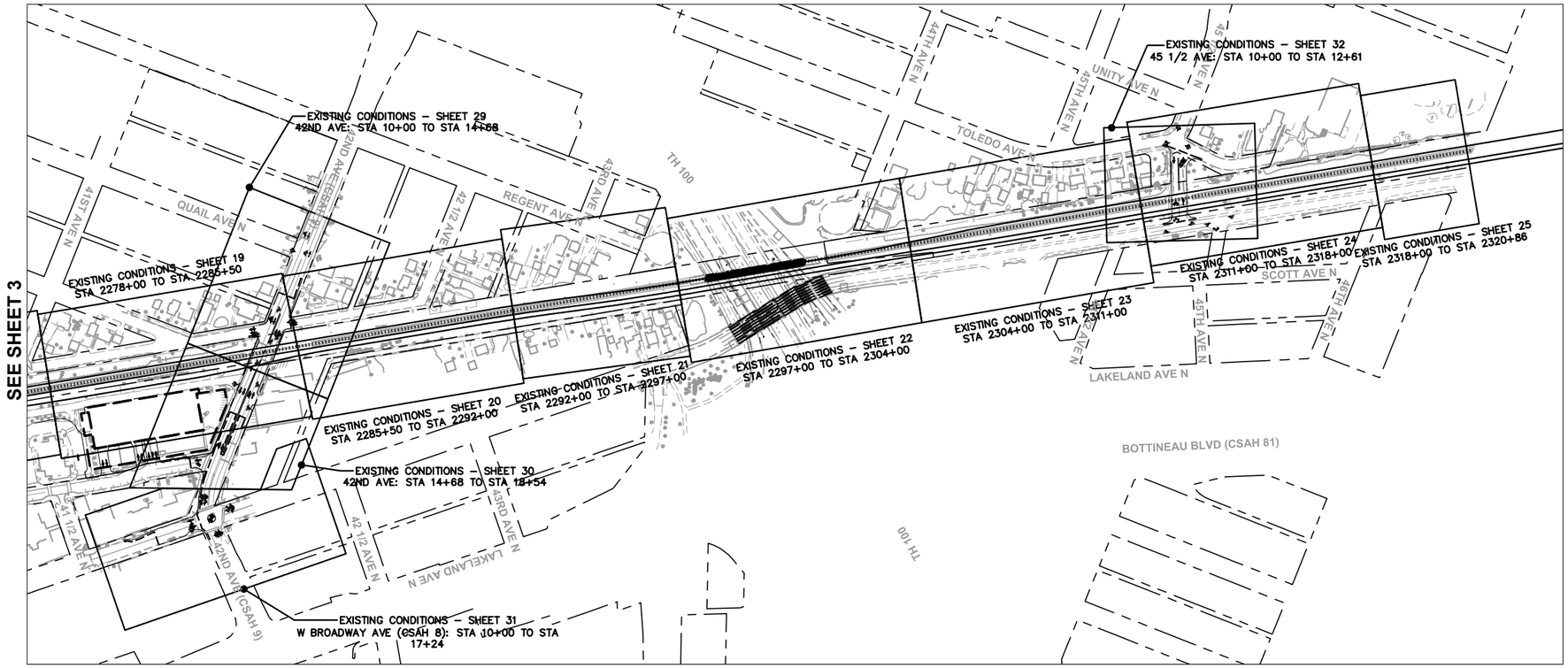

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SHEET LAYOUT INDEX

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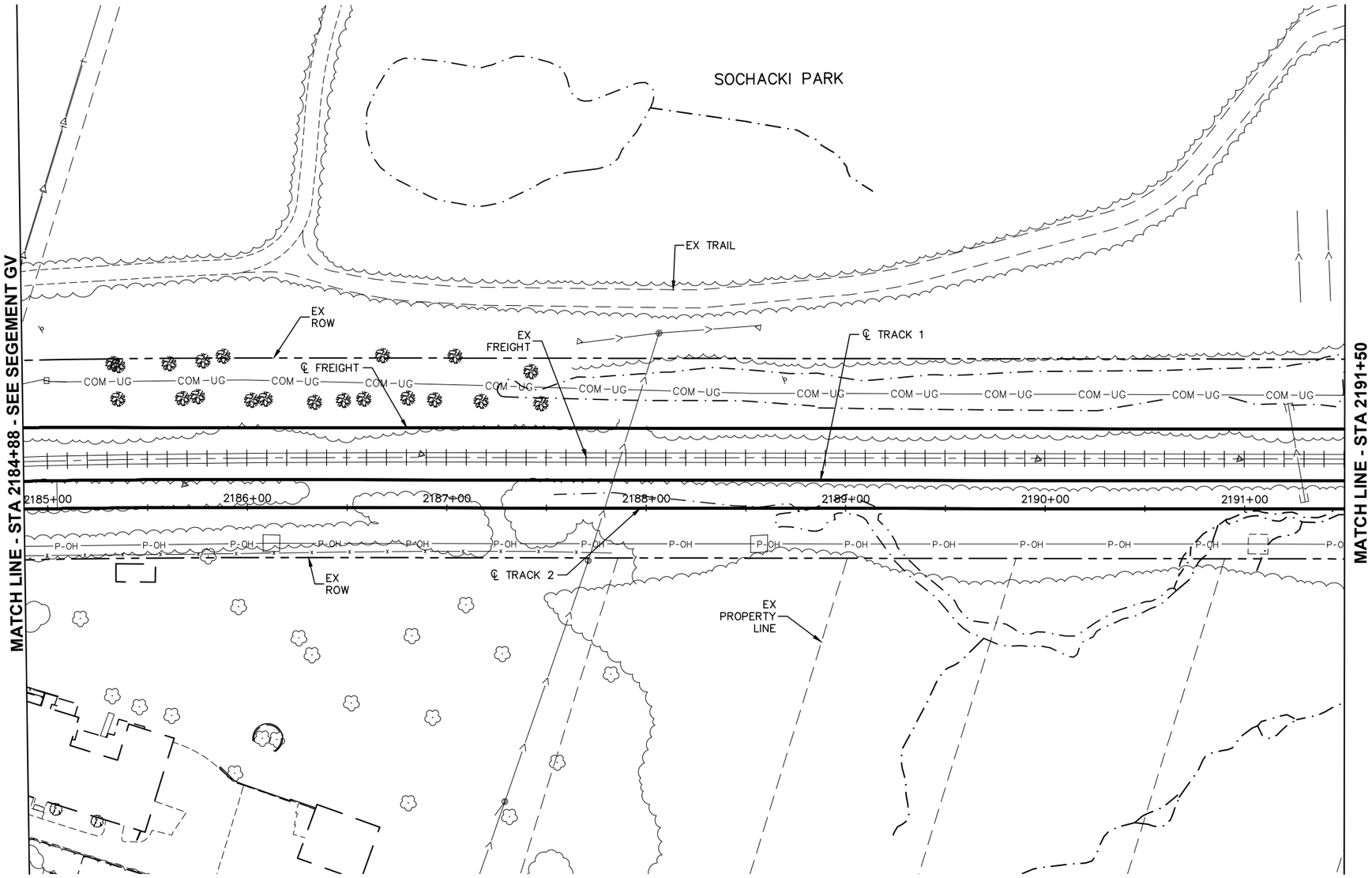

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METRO BLUE LINE EXTENSION Bassett Creek LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2184+88 TO STA 2191+50

DISCIPLINE: SURVEY

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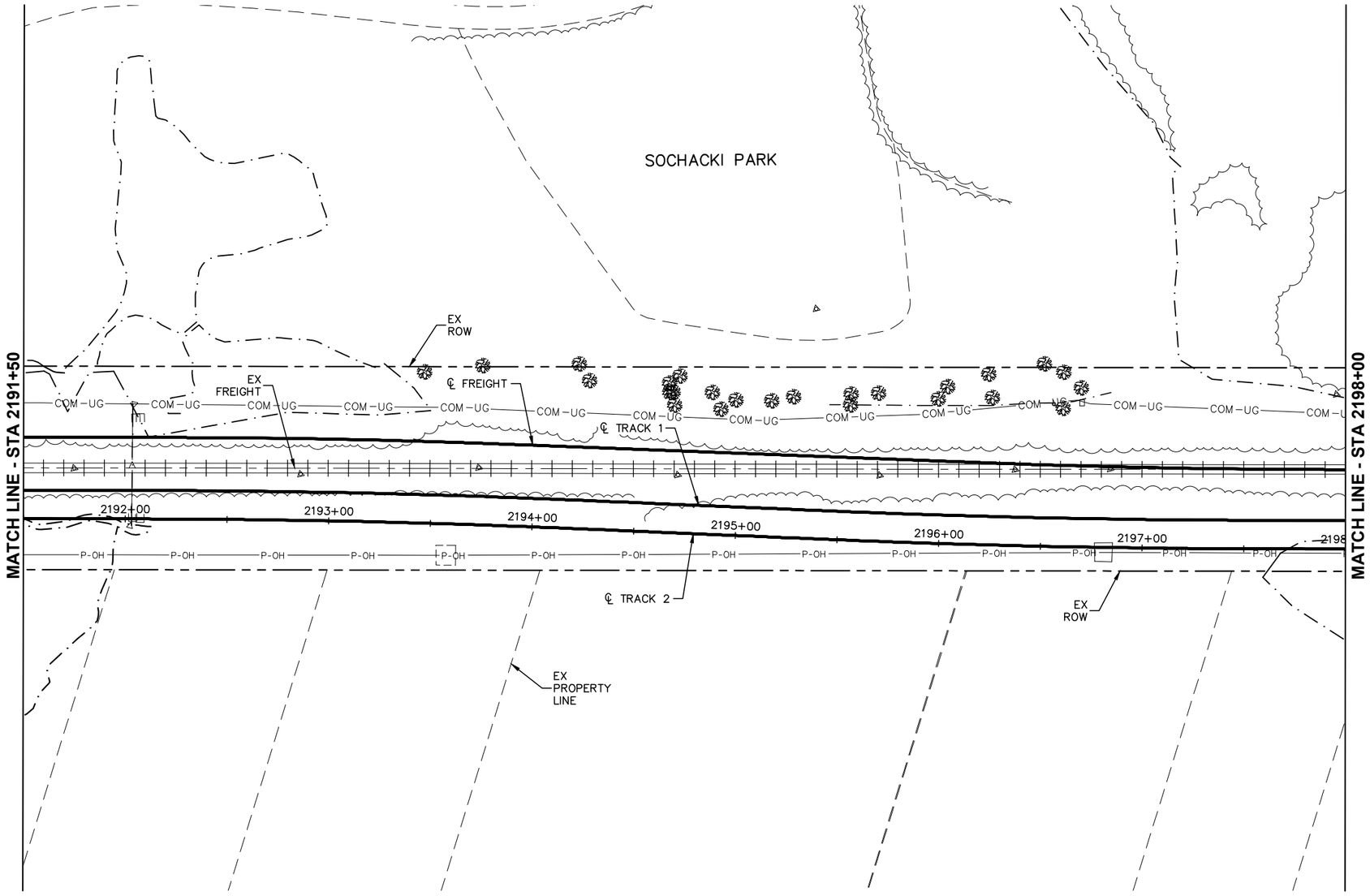

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METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2191+50 TO STA 2198+00

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SHEET **6** OF **93**

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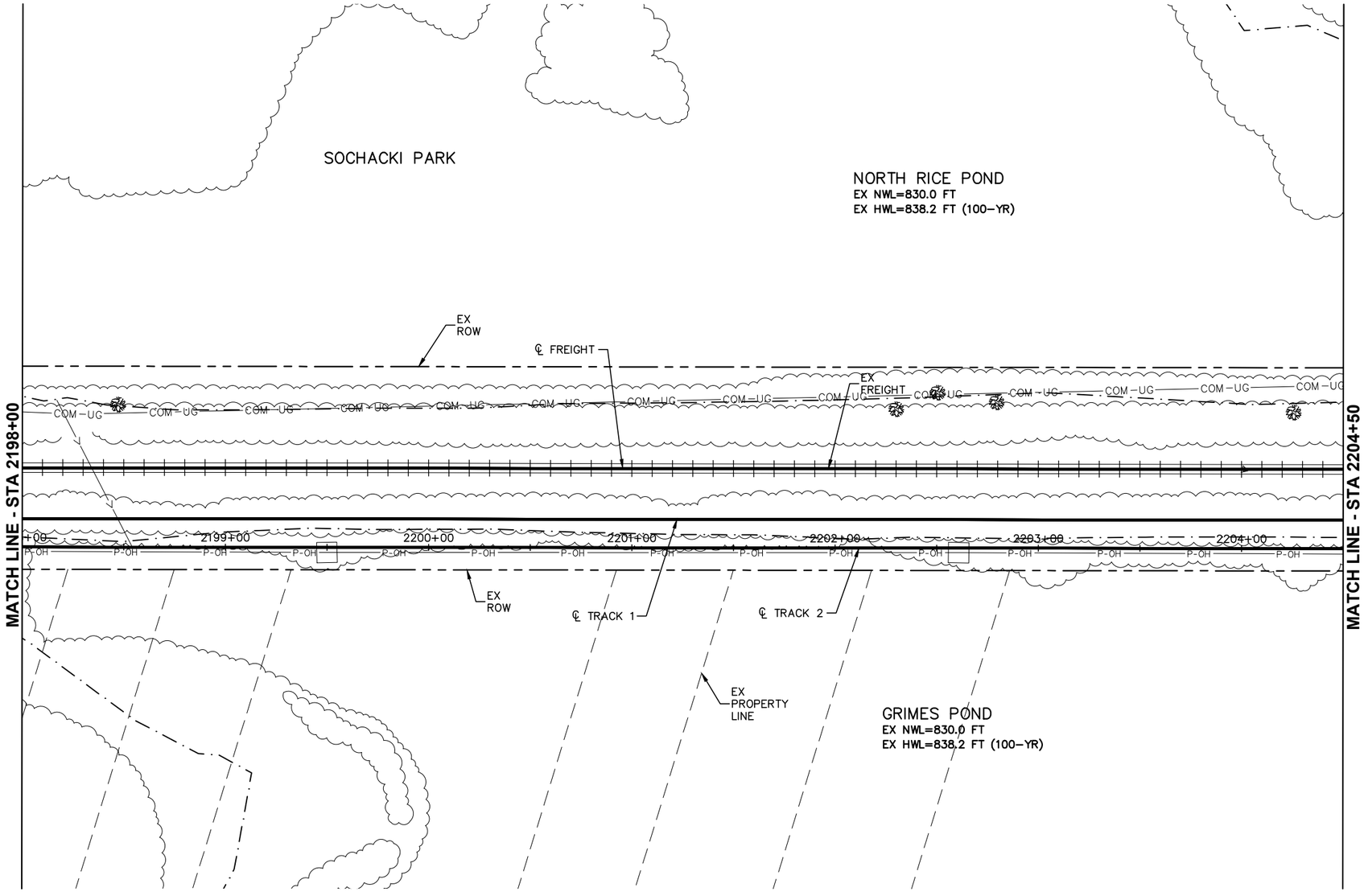

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METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2198+00 TO STA 2204+50

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-003

SHEET 7 OF 93

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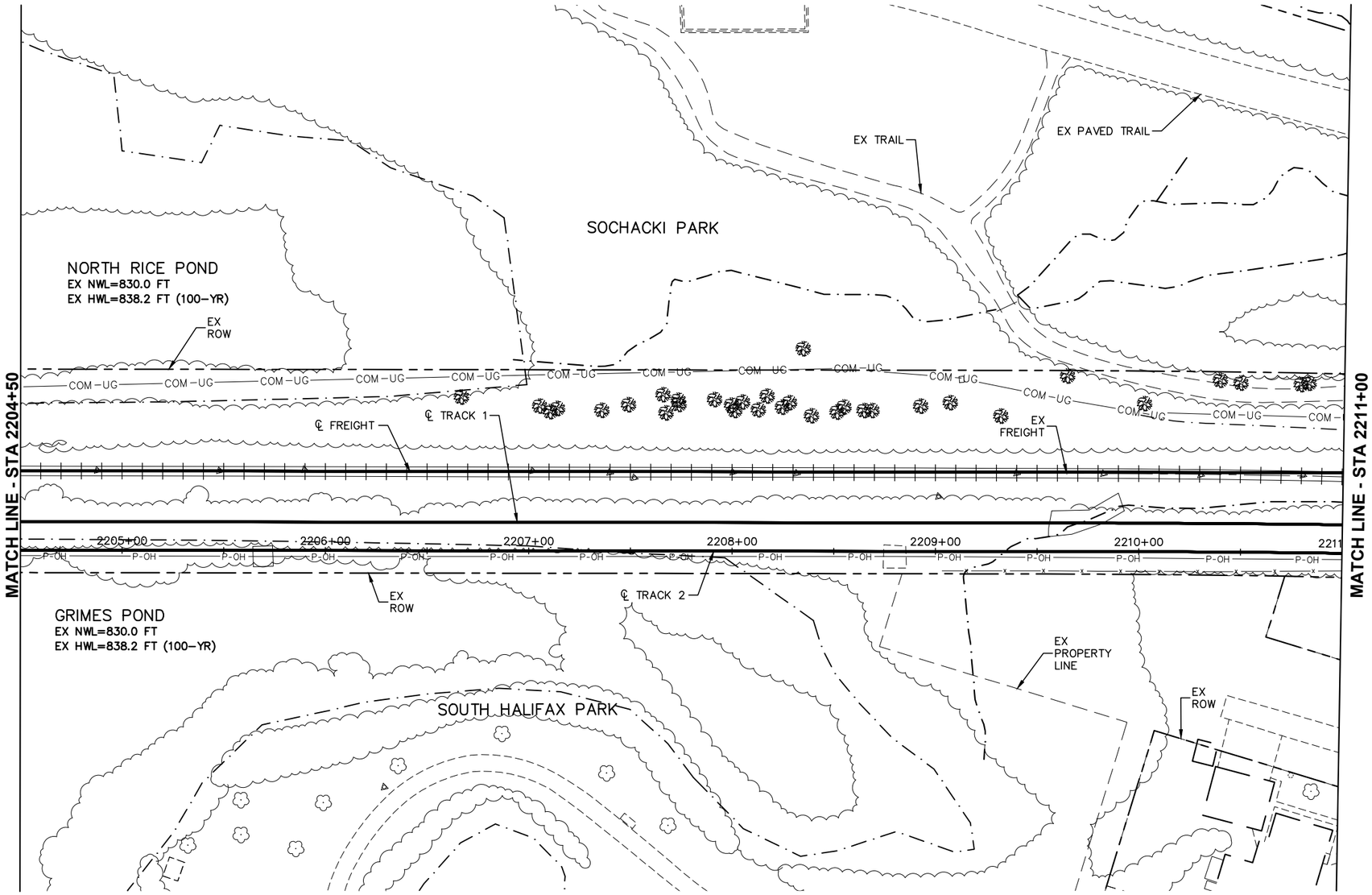

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SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2204+50 TO STA 2211+00

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SHEET **8** OF **93**

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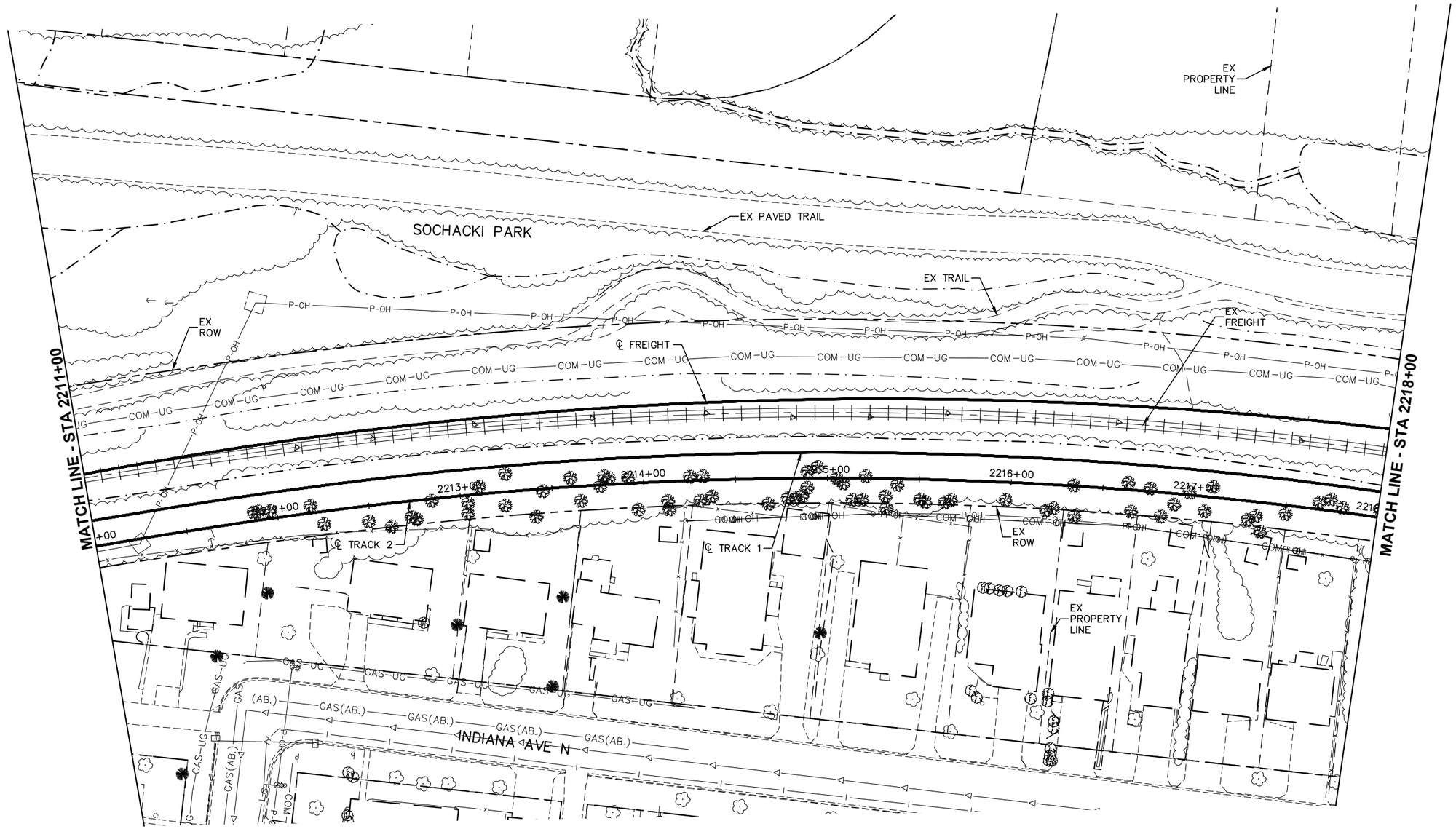

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STA 2211+00 TO STA 2218+00

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SHEET NAME: R-EXCON-PLN-005

SHEET 9 OF 93

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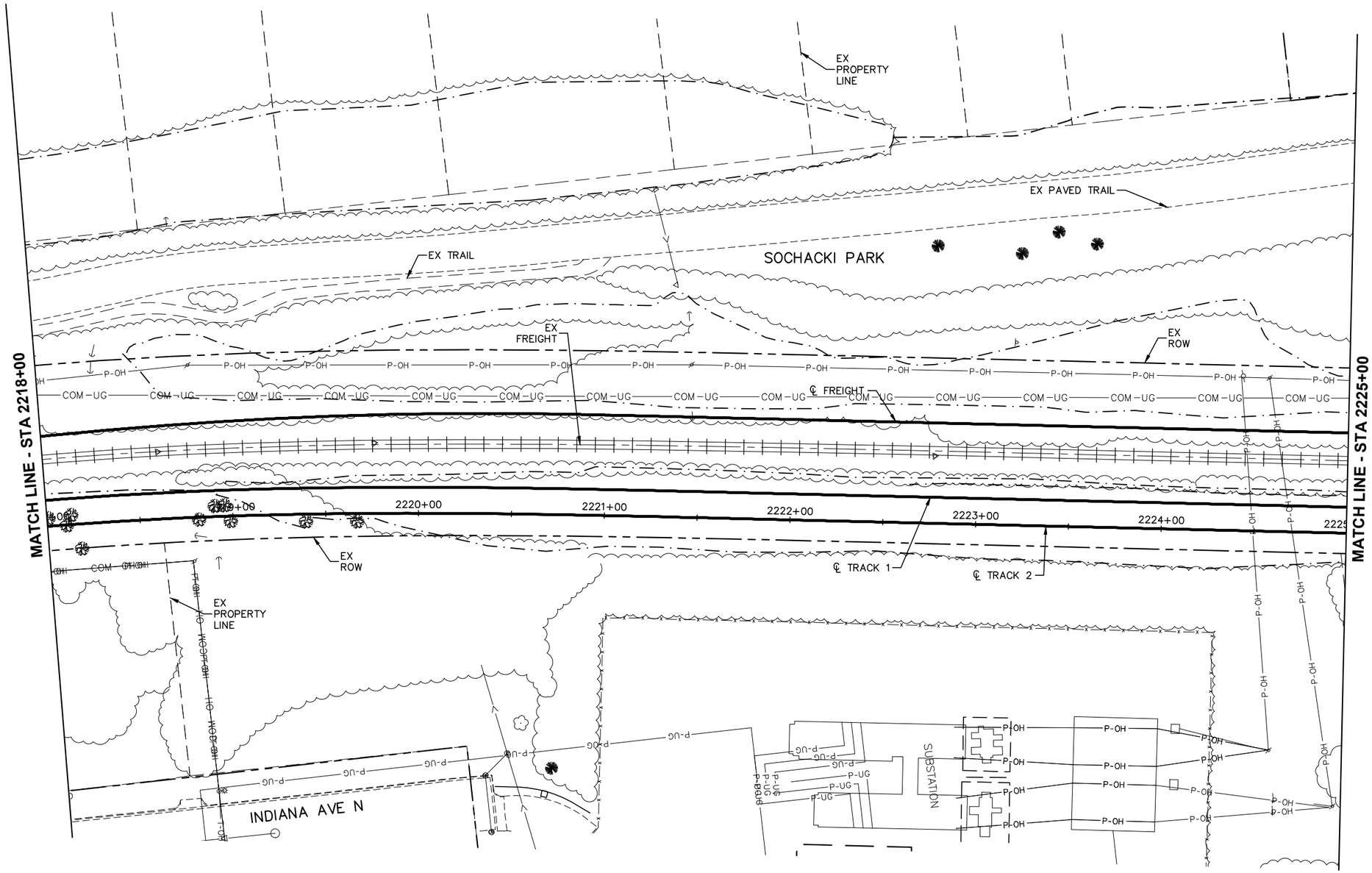

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METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
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STA 2218+00 TO STA 2225+00

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SHEET NAME: R-EXCON-PLN-006

SHEET 10 OF 93

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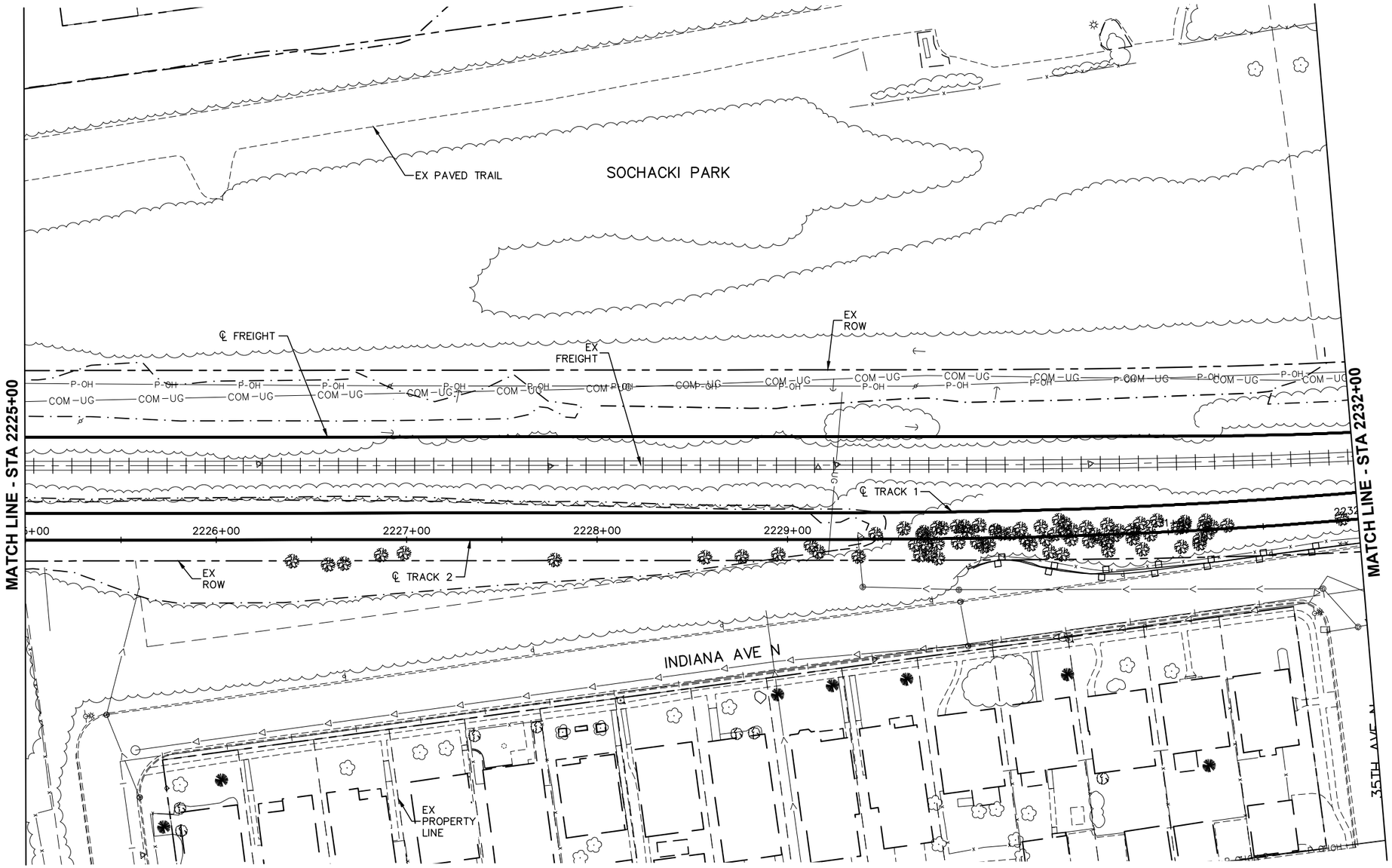

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SHEET 11 OF 93

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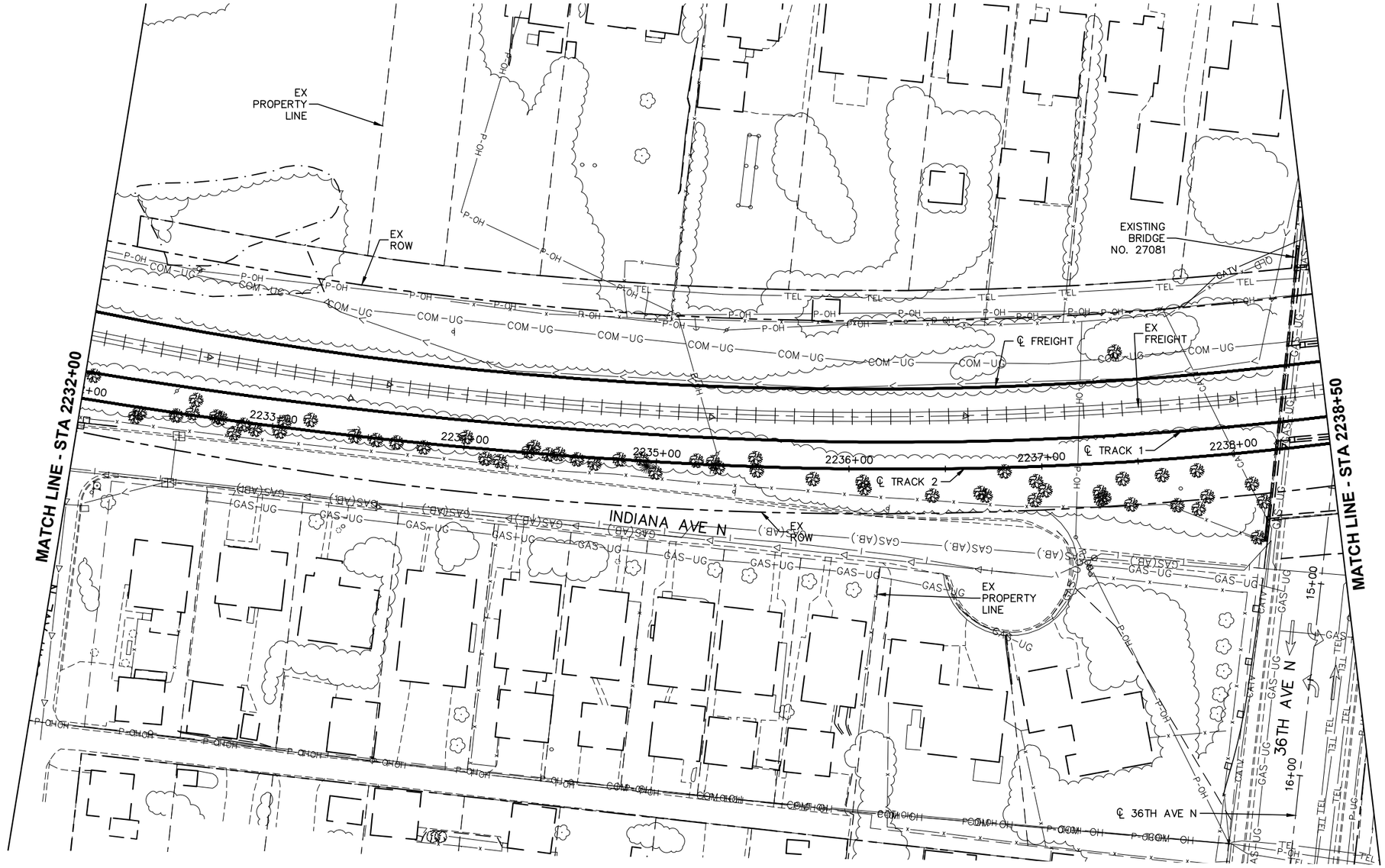

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STA 2232+00 TO STA 2238+50

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-008

SHEET 12 OF 93

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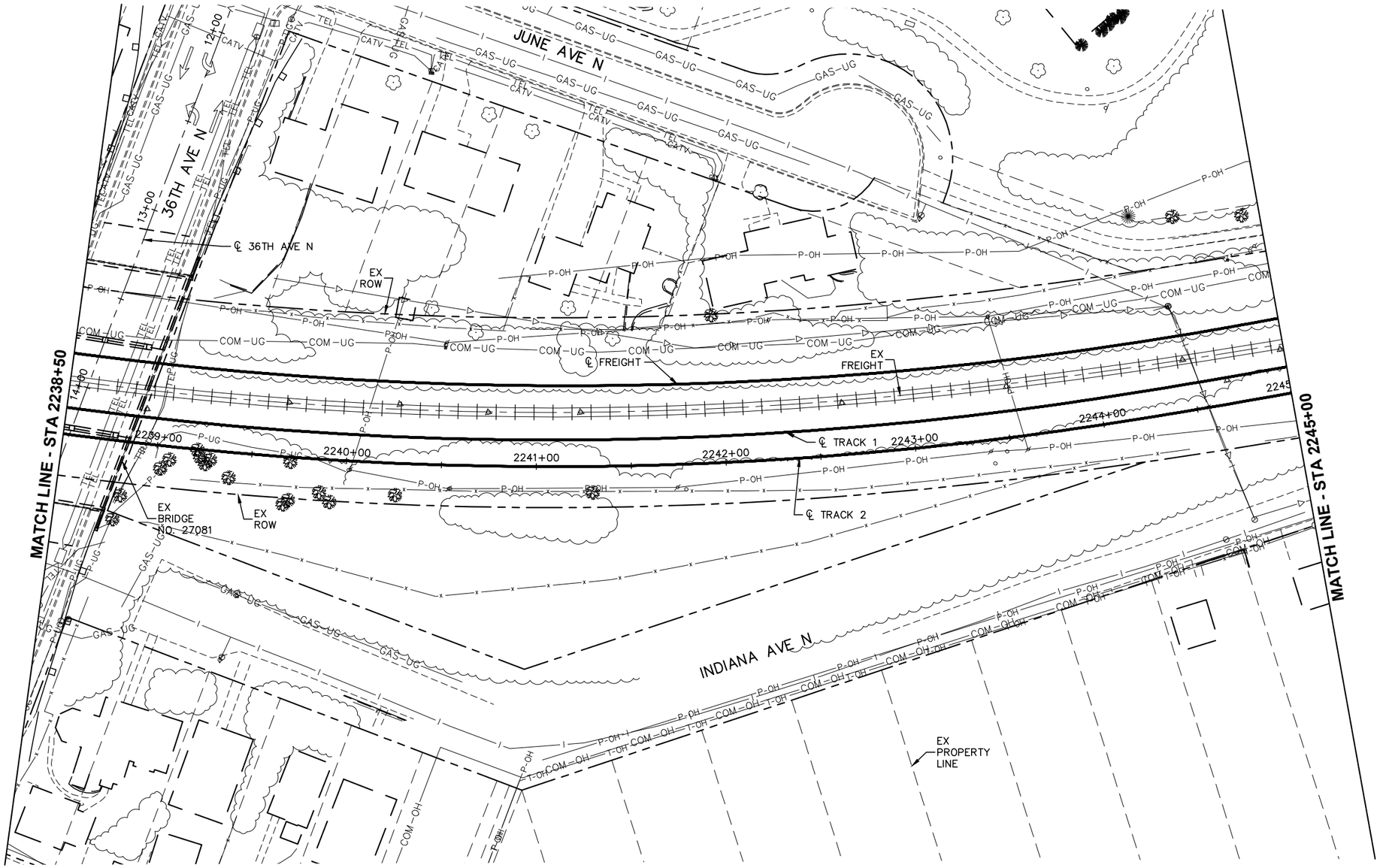

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METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
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STA 2238+50 TO STA 2245+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-009

SHEET 13 OF 93

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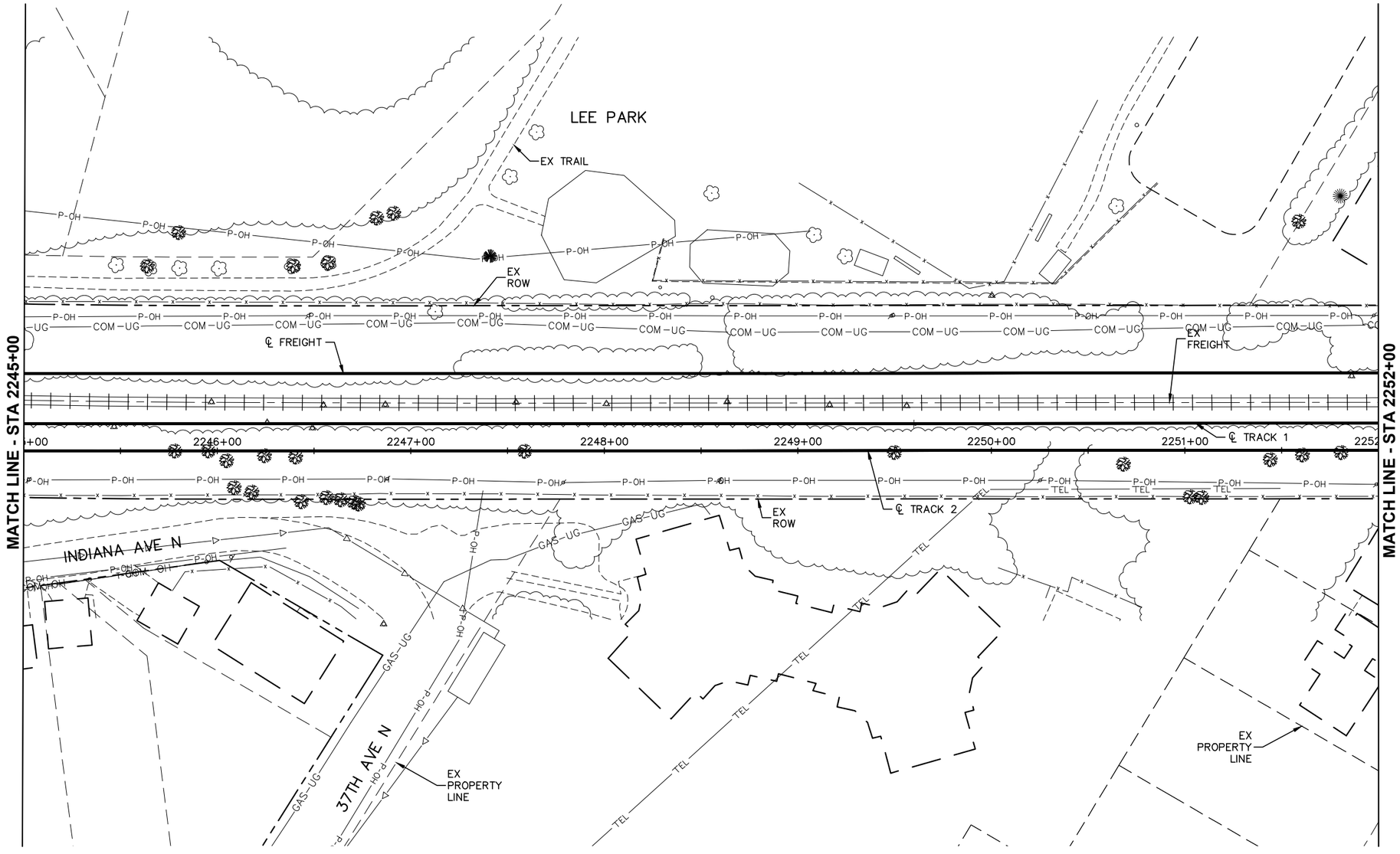

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METRO BLUE LINE EXTENSION
Bottineau LRT

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SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2245+00 TO STA 2252+00

DISCIPLINE: **SURVEY**

SHEET NAME: **R-EXCON-PLN-010**

SHEET **14** OF **93**

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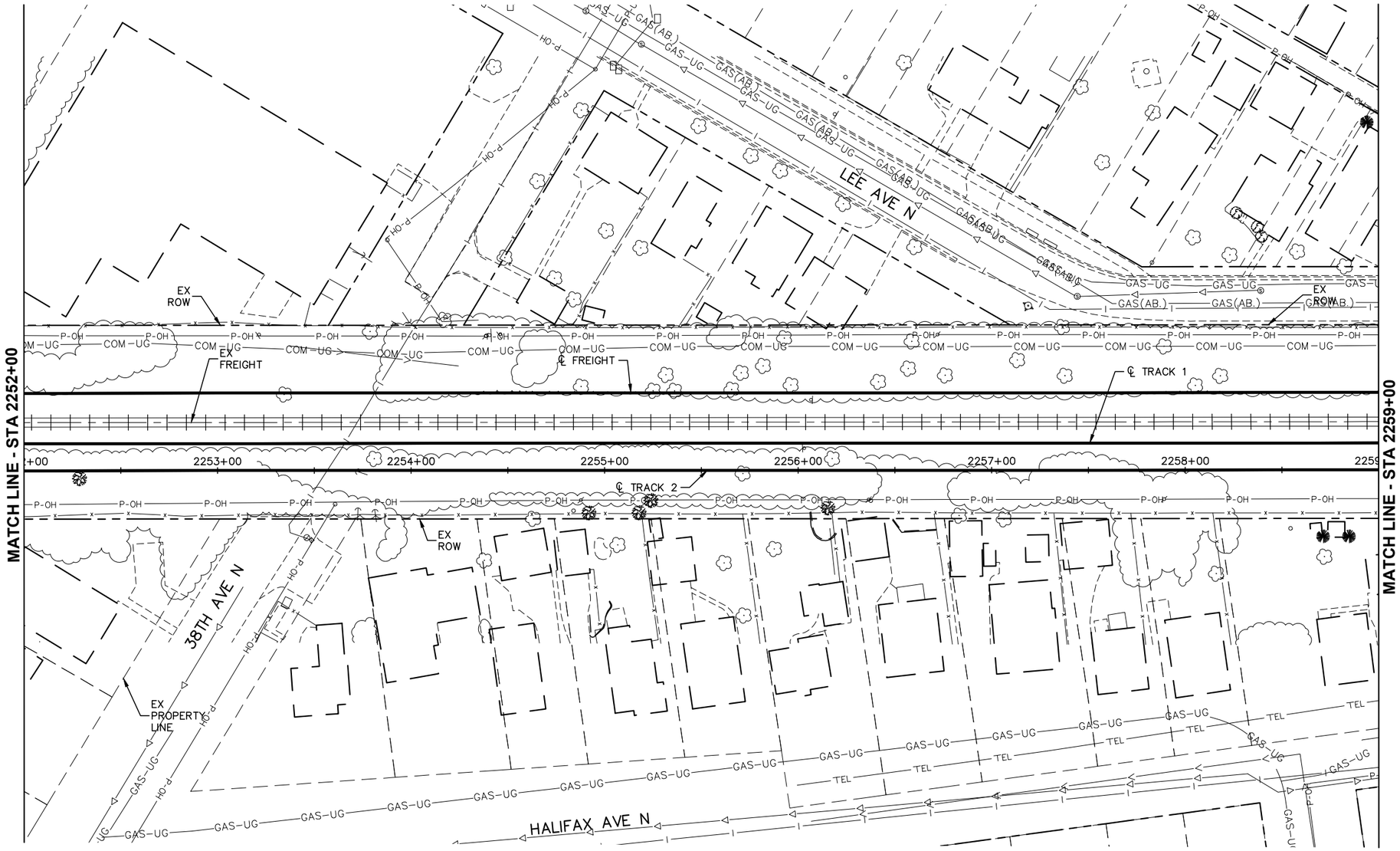

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METRO BLUE LINE EXTENSION Bottineau LRT

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SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2252+00 TO STA 2259+00

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SHEET 15 OF 93

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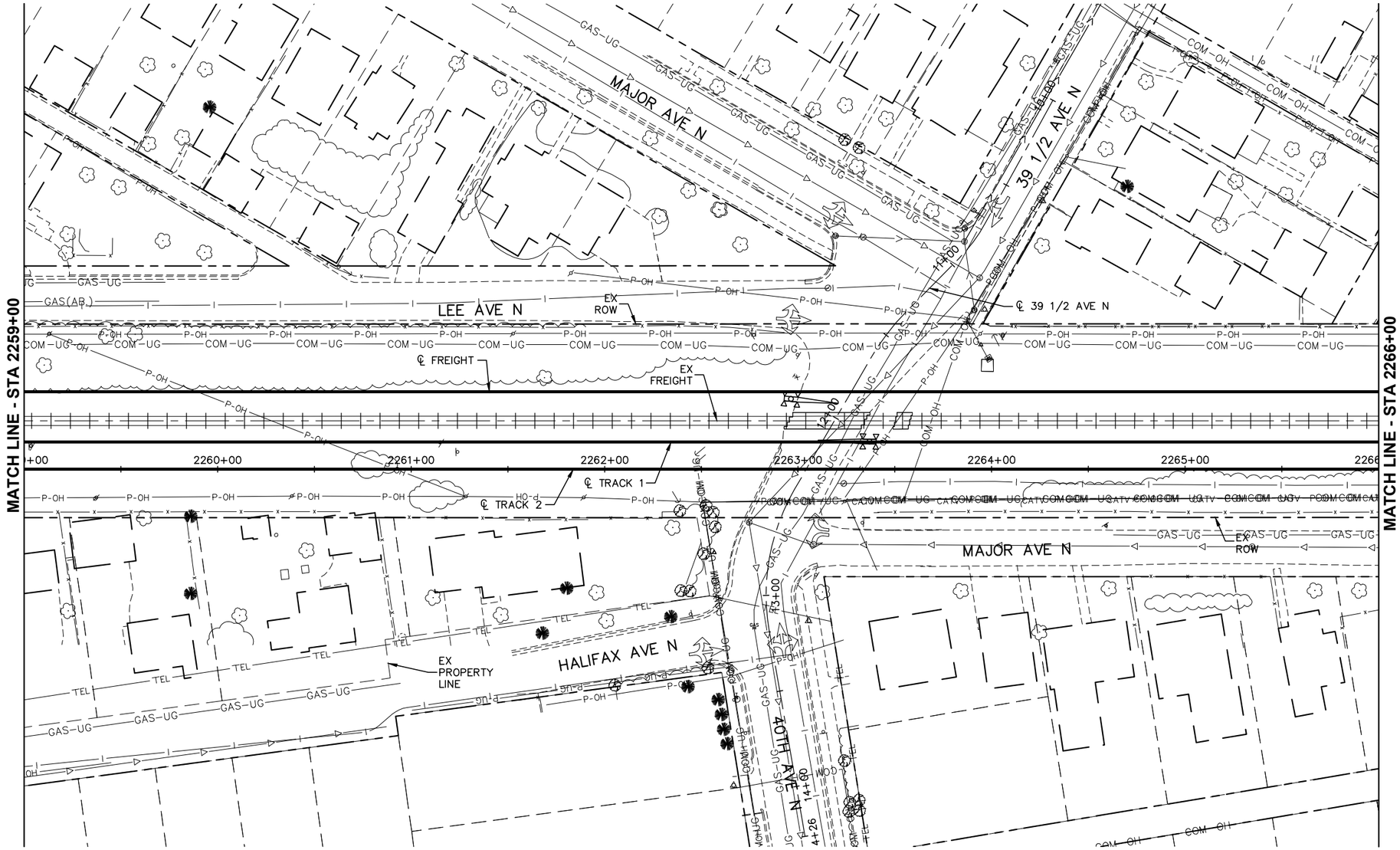

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METRO BLUE LINE EXTENSION
BOTTINEAU LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2259+00 TO STA 2266+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-012

SHEET 16 OF 93

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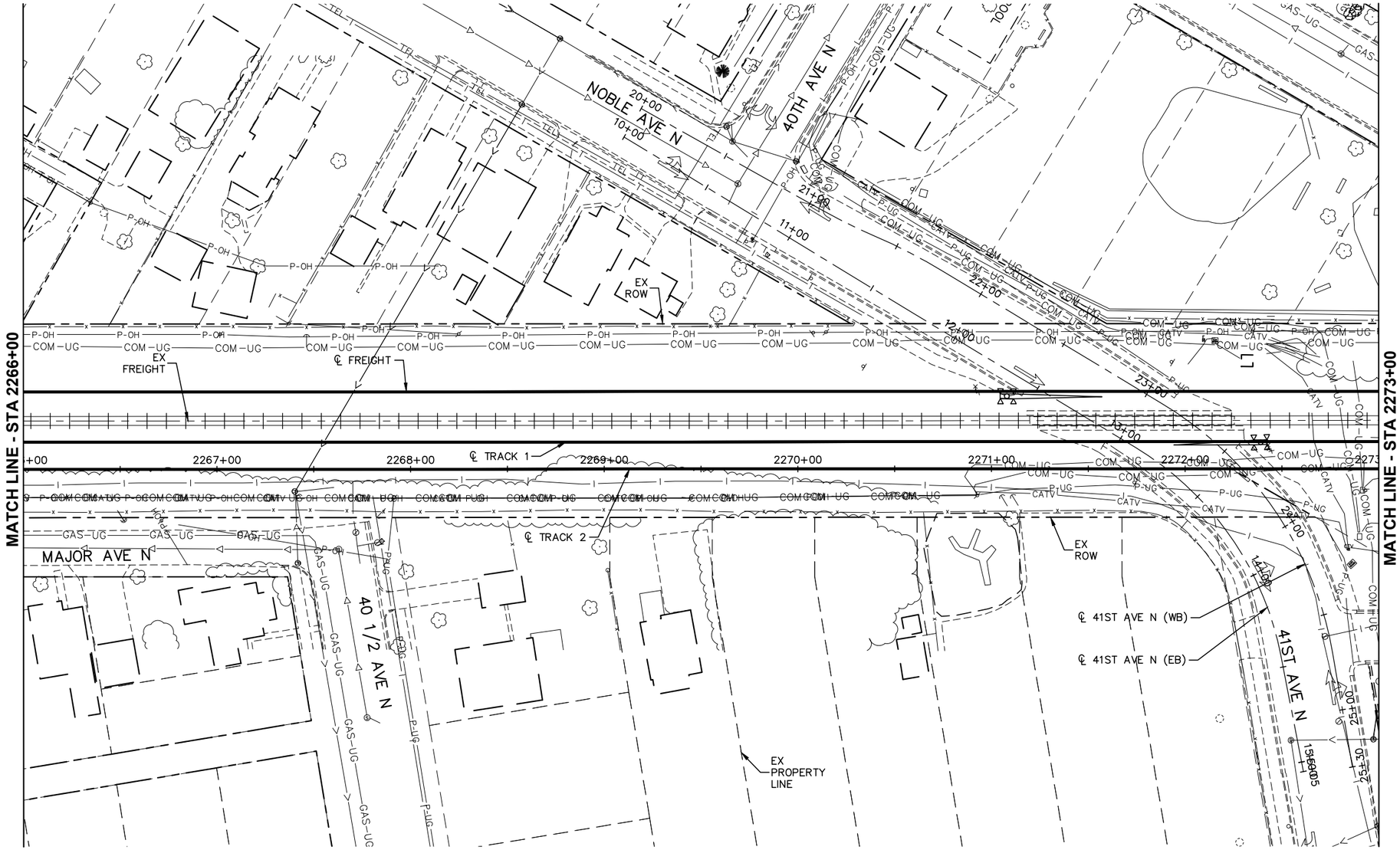

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

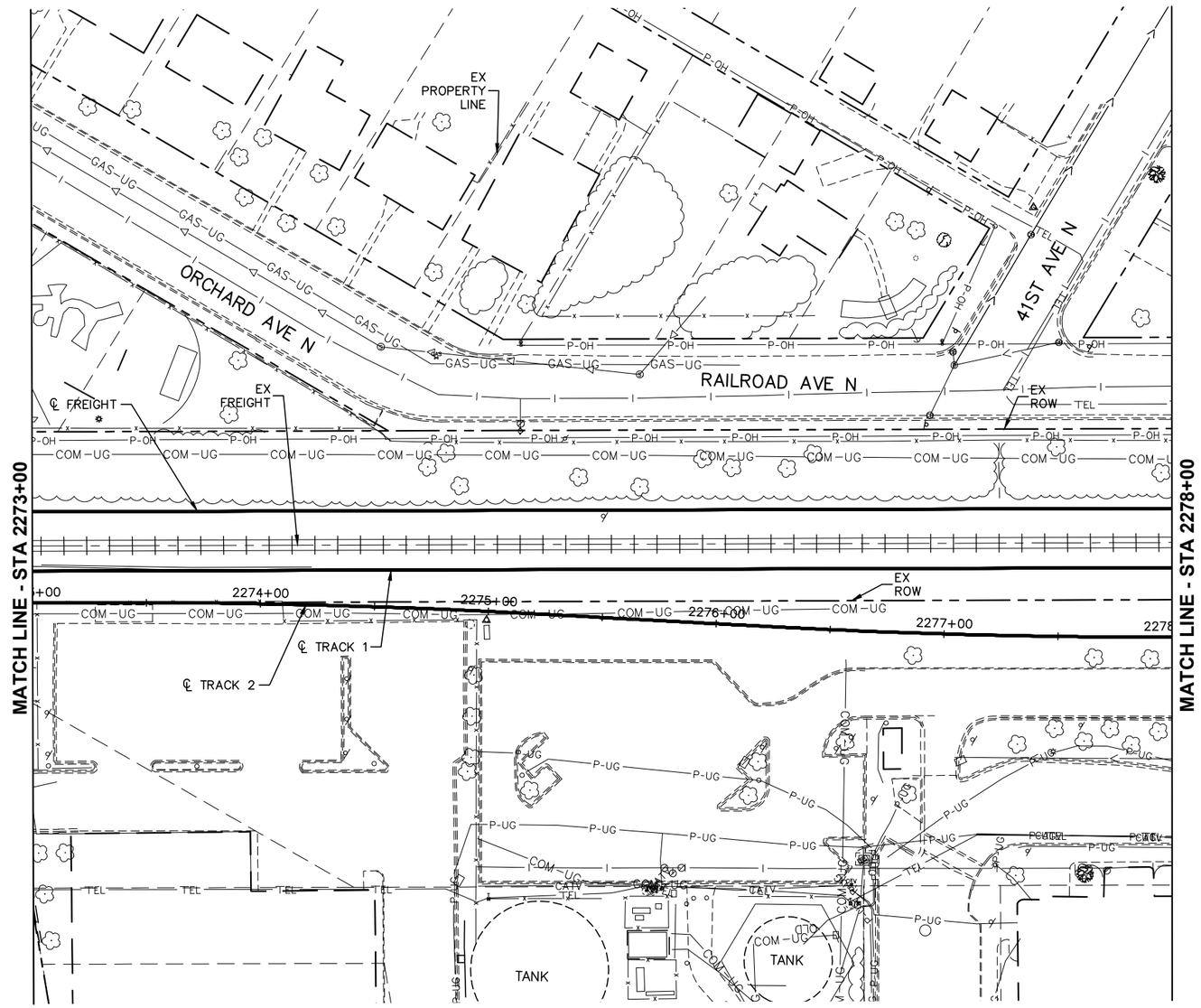
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2266+00 TO STA 2273+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-013

SHEET 17 OF 93

Dec, 07 2015 03:22 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

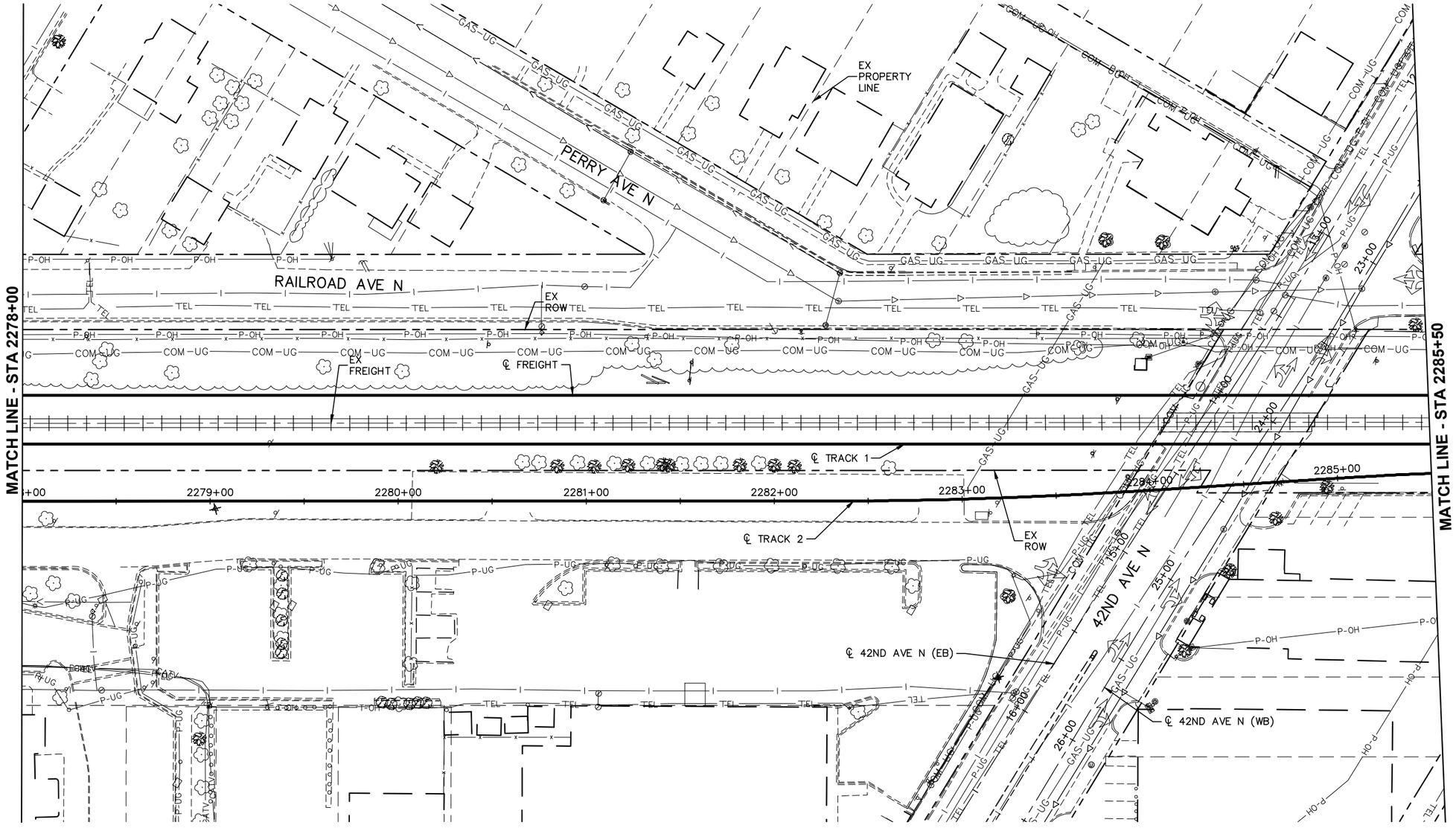
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2273+00 TO STA 2278+00

DISCIPLINE: **SURVEY**

SHEET NAME: **R-EXCON-PLN-014**

SHEET 18 OF 93

Dec, 07 2015 03:22 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

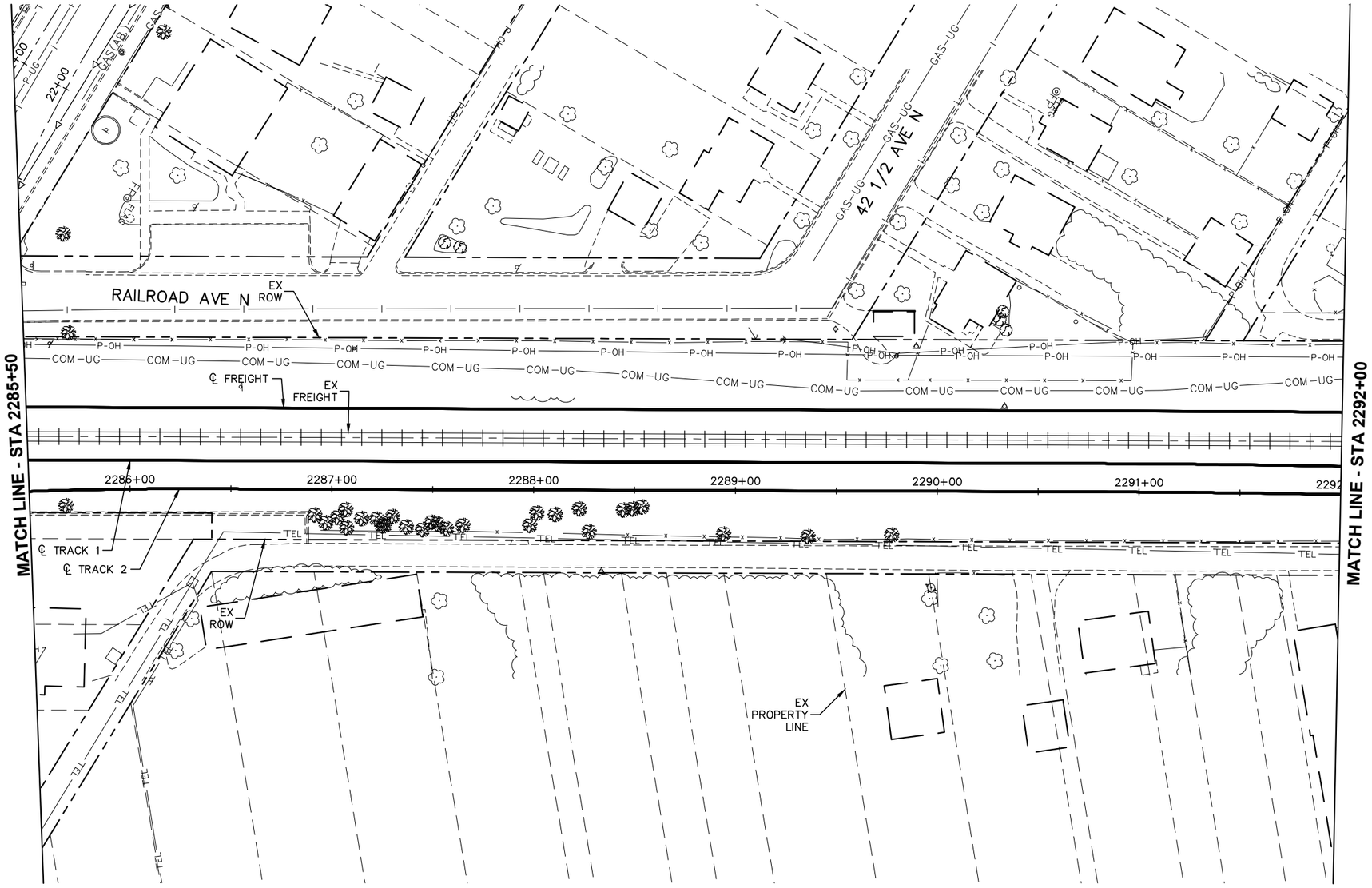
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2278+00 TO STA 2285+50

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-015

SHEET 19 OF 93

Dec, 07 2015 03:23 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

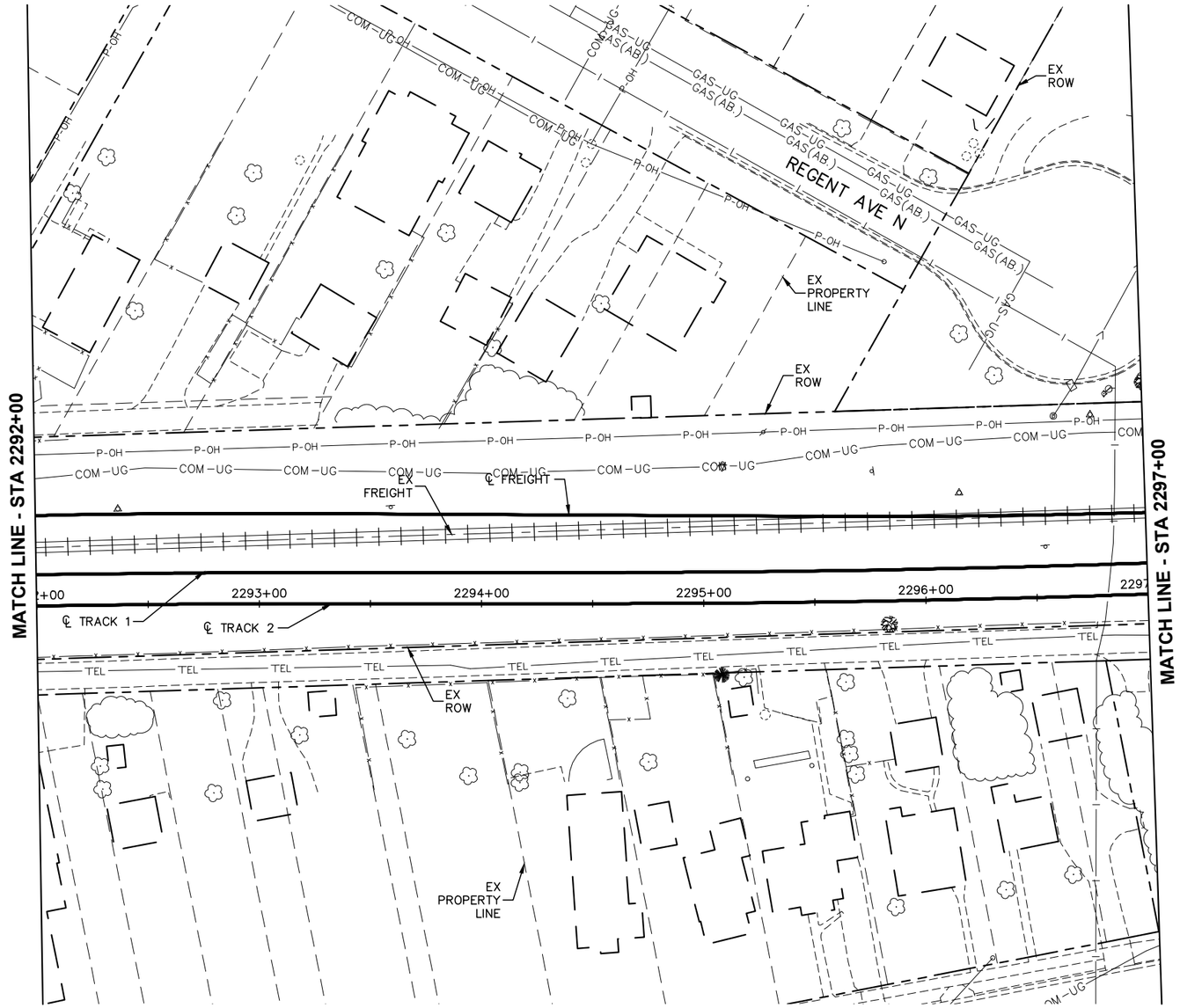
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2285+50 TO STA 2292+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-016

SHEET 20 OF 93

Dec, 07 2015 03:23 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

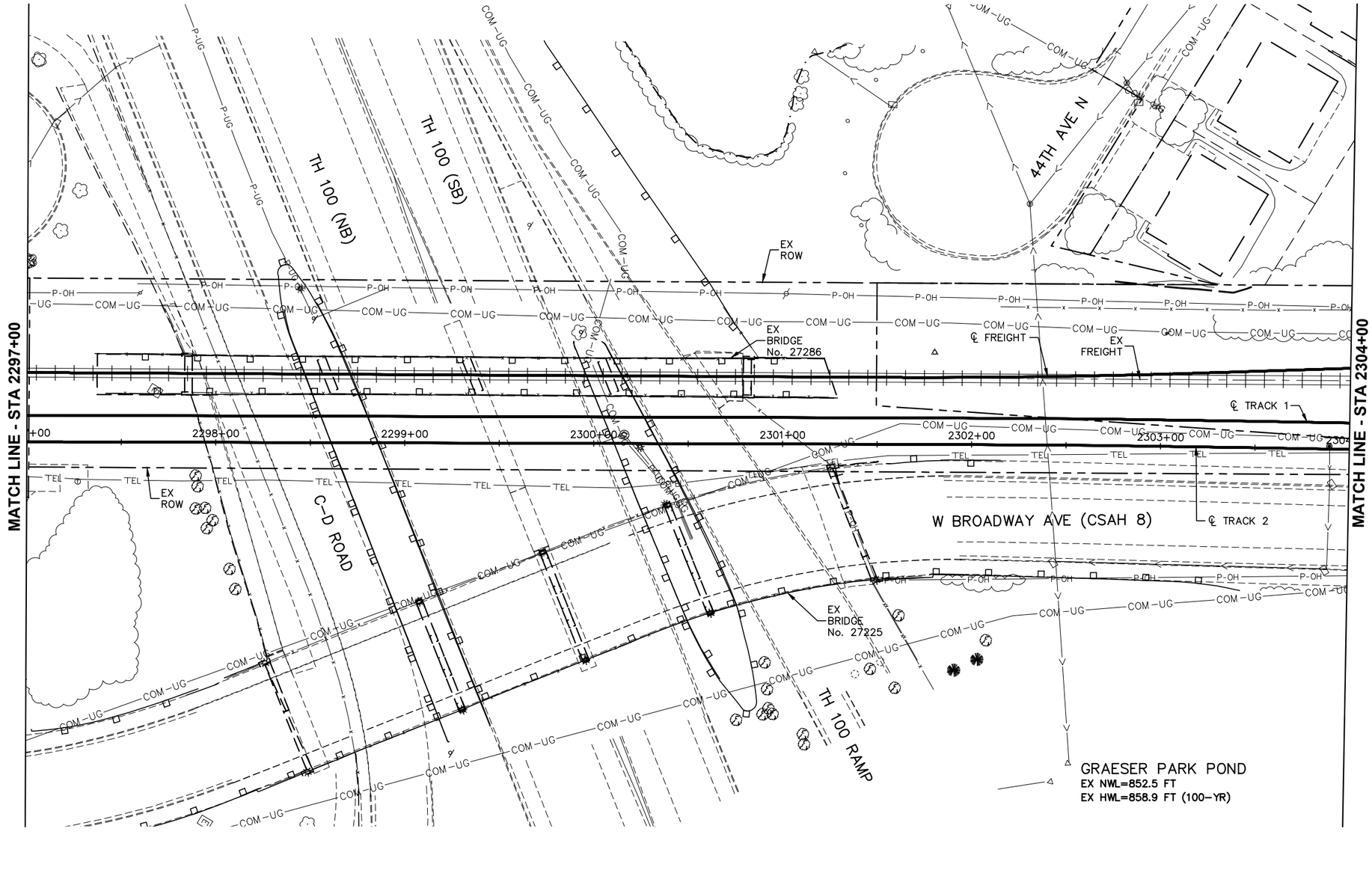
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2292+00 TO STA 2297+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-017

SHEET 21 OF 93

Dec, 07 2015 03:24 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

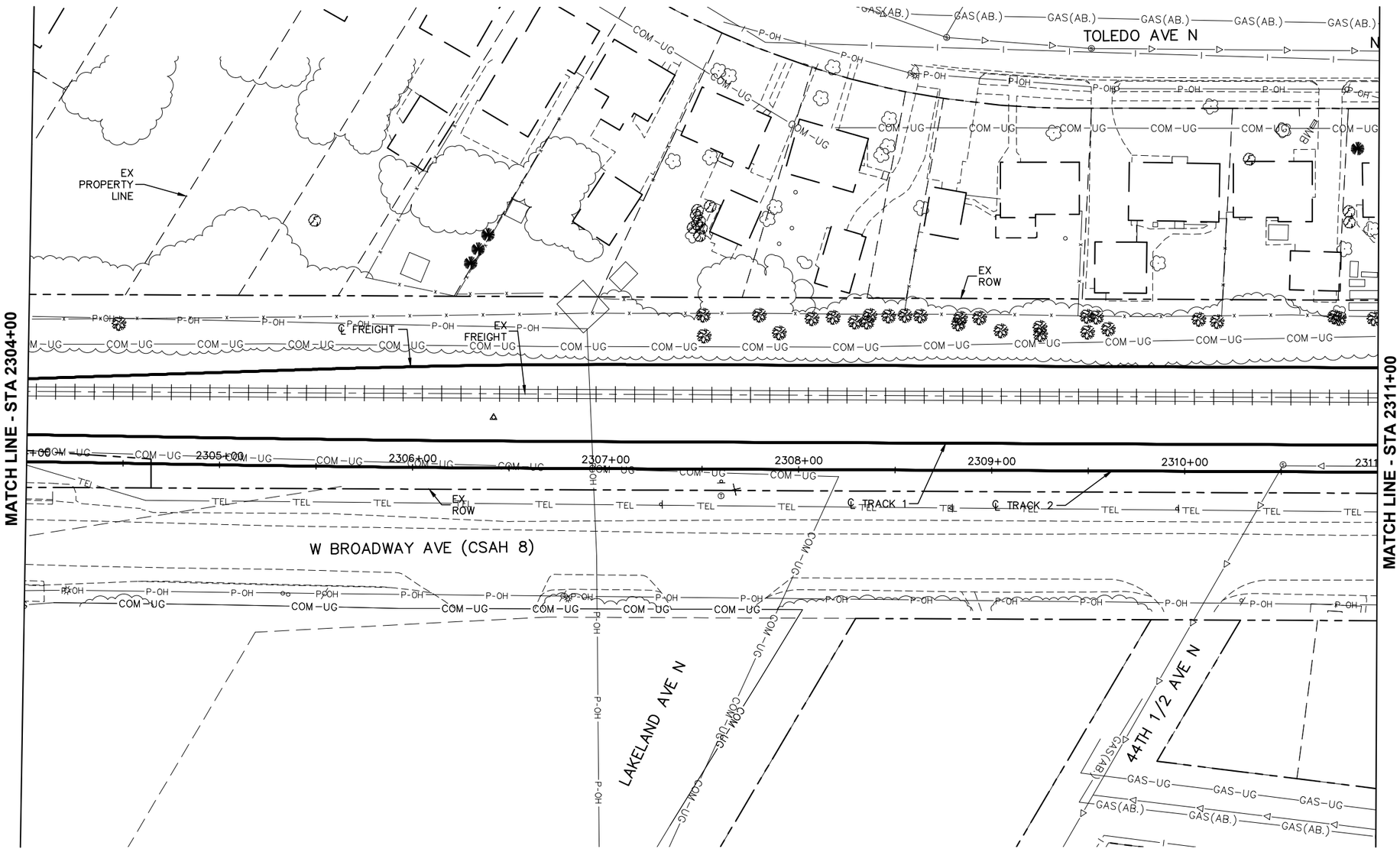
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2297+00 TO STA 2304+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-018

SHEET 22 OF 93

Dec, 07 2015 03:24 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

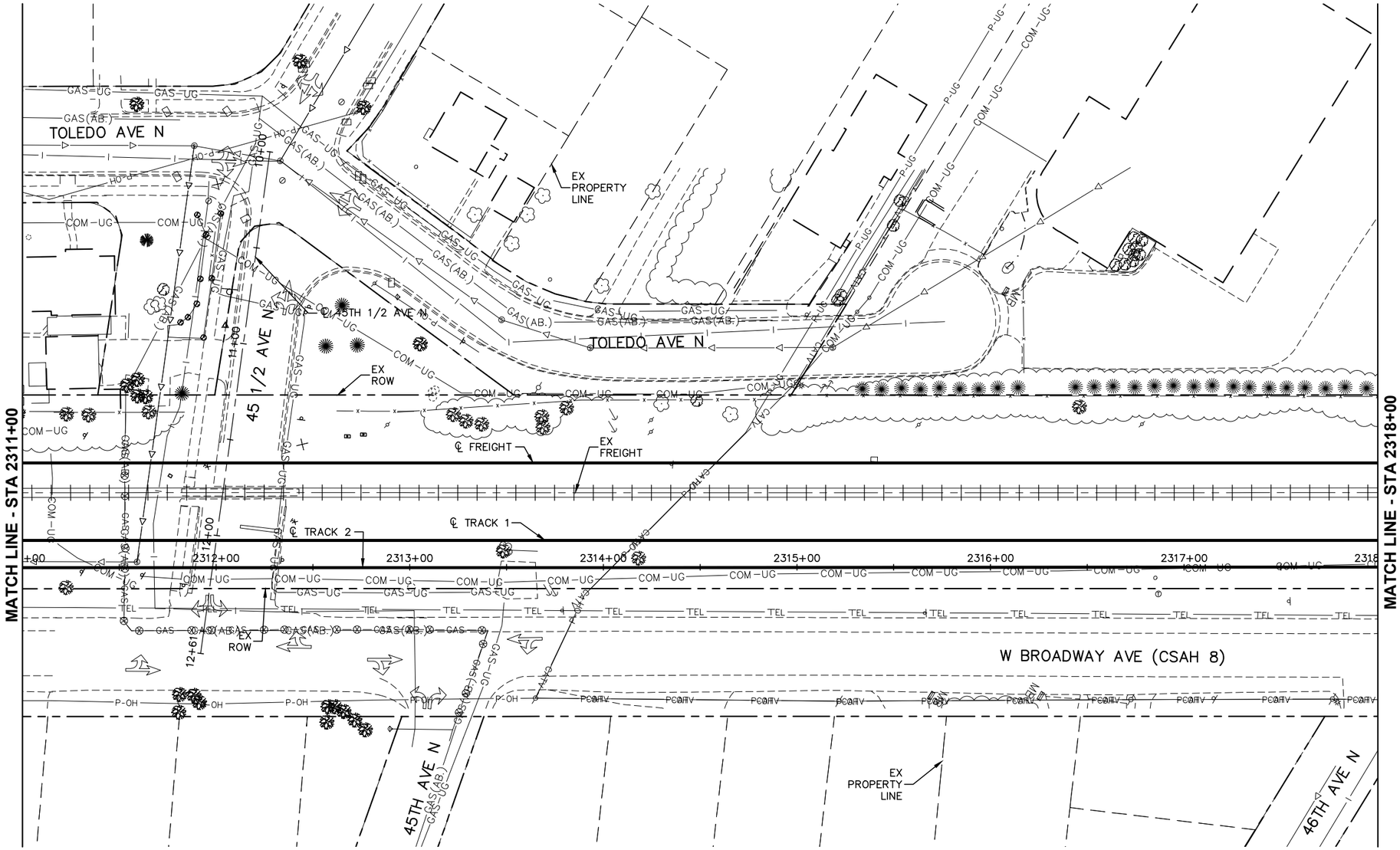
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2304+00 TO STA 2311+00

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-019

SHEET 23 OF 93

Dec, 07 2015 03:25 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

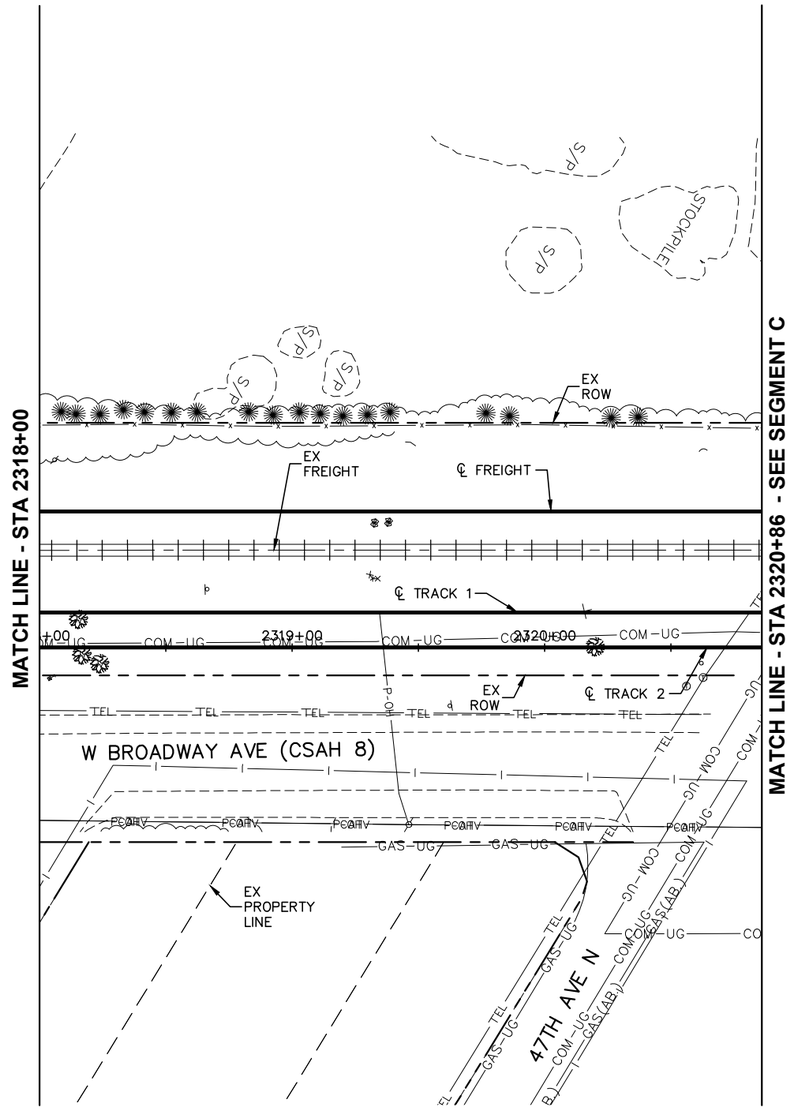
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2311+00 TO STA 2318+00

DISCIPLINE: **SURVEY**

SHEET NAME: **R-EXCON-PLN-020**

SHEET 24 OF 93

Dec, 07 2015 03:26 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION
Bottineau LRT

METROPOLITAN COUNCIL

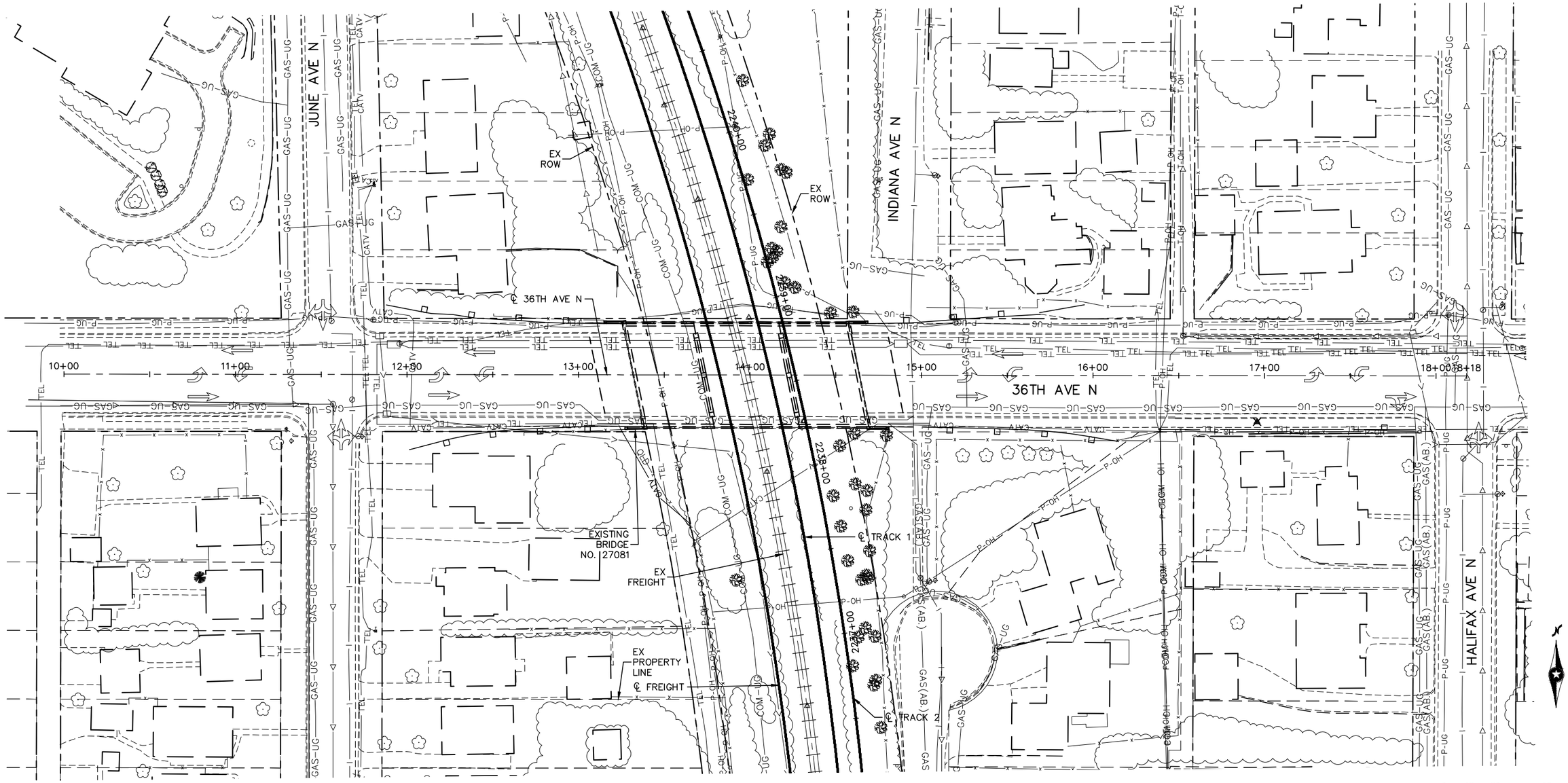
SEGMENT R
RAIL CORRIDOR
EXISTING CONDITIONS
STA 2318+00 TO STA 2320+86

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-021

SHEET 25 OF 93

Dec, 07 2015 03:27 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

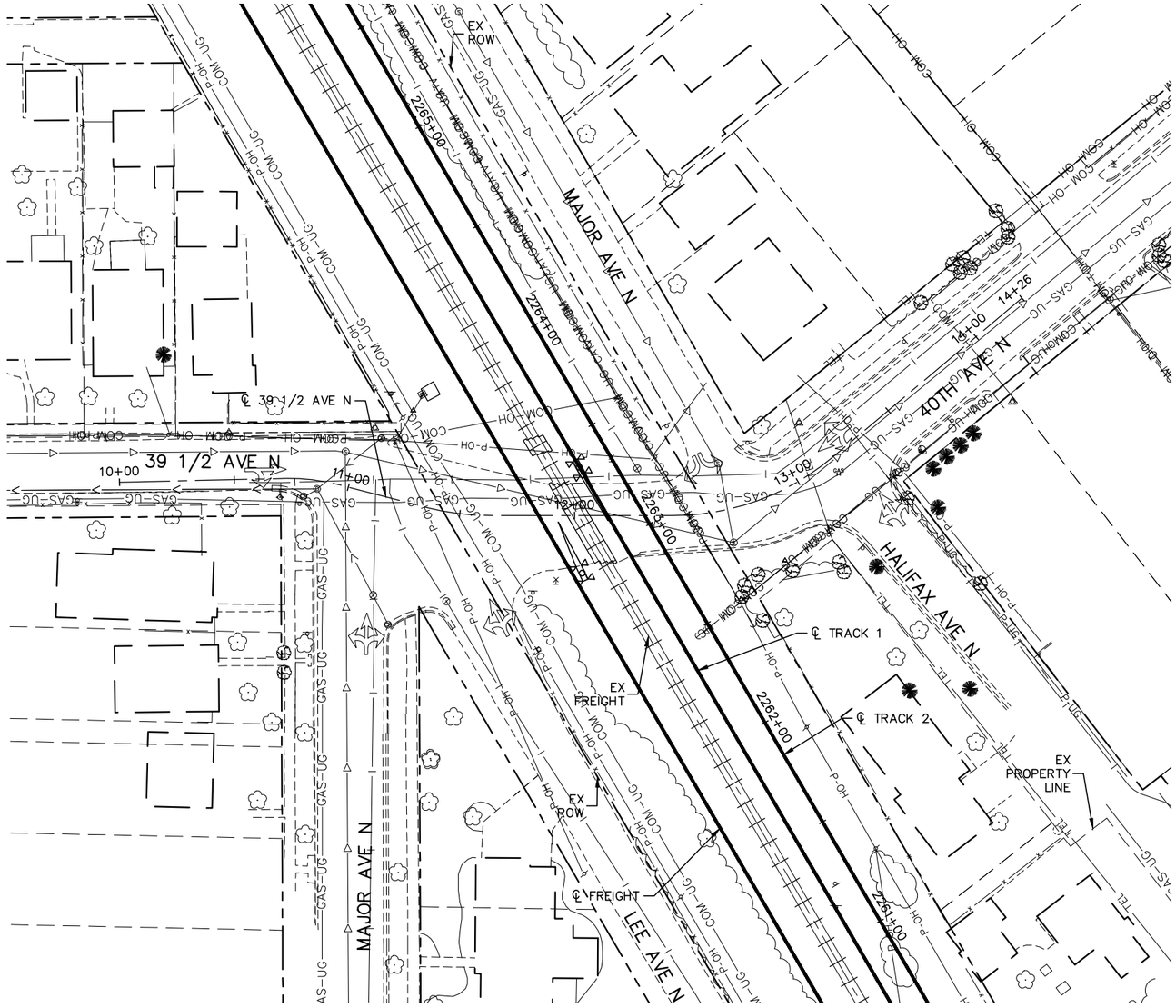
SEGMENT R
36TH AVE
EXISTING CONDITIONS
STA 10+00 TO STA 18+18

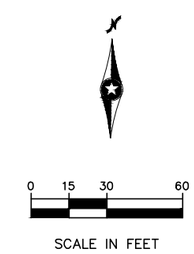
DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-022

SHEET 26 OF 93

Dec, 07 2015 03:27 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda





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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

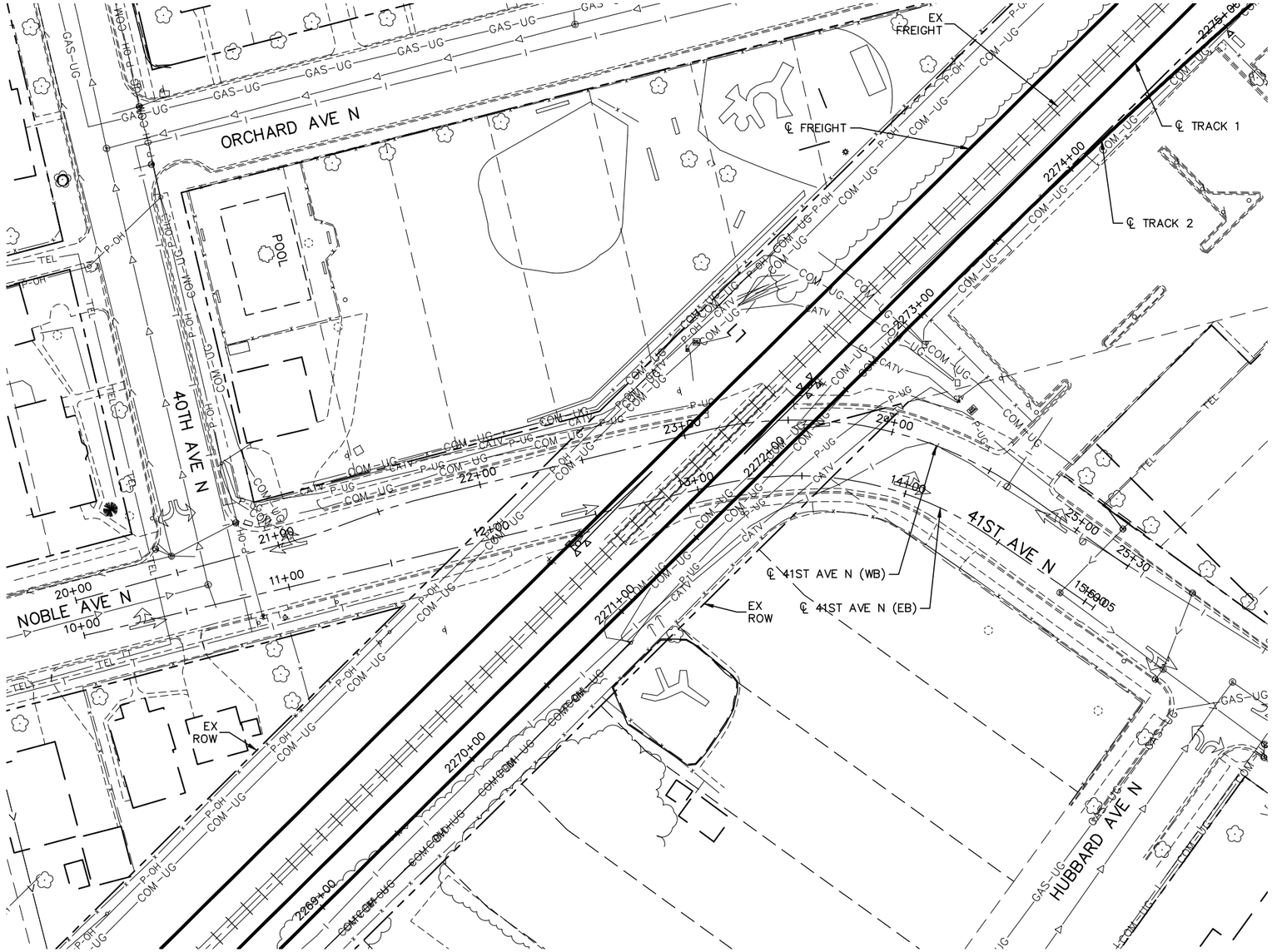
SEGMENT R
39TH 1/2 AVE N
EXISTING CONDITIONS
STA 10+00 TO STA 14+26

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-023

SHEET 27 OF 93

Dec, 07 2015 03:28 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION
BOONE-BROOKLYN LRT

METROPOLITAN COUNCIL

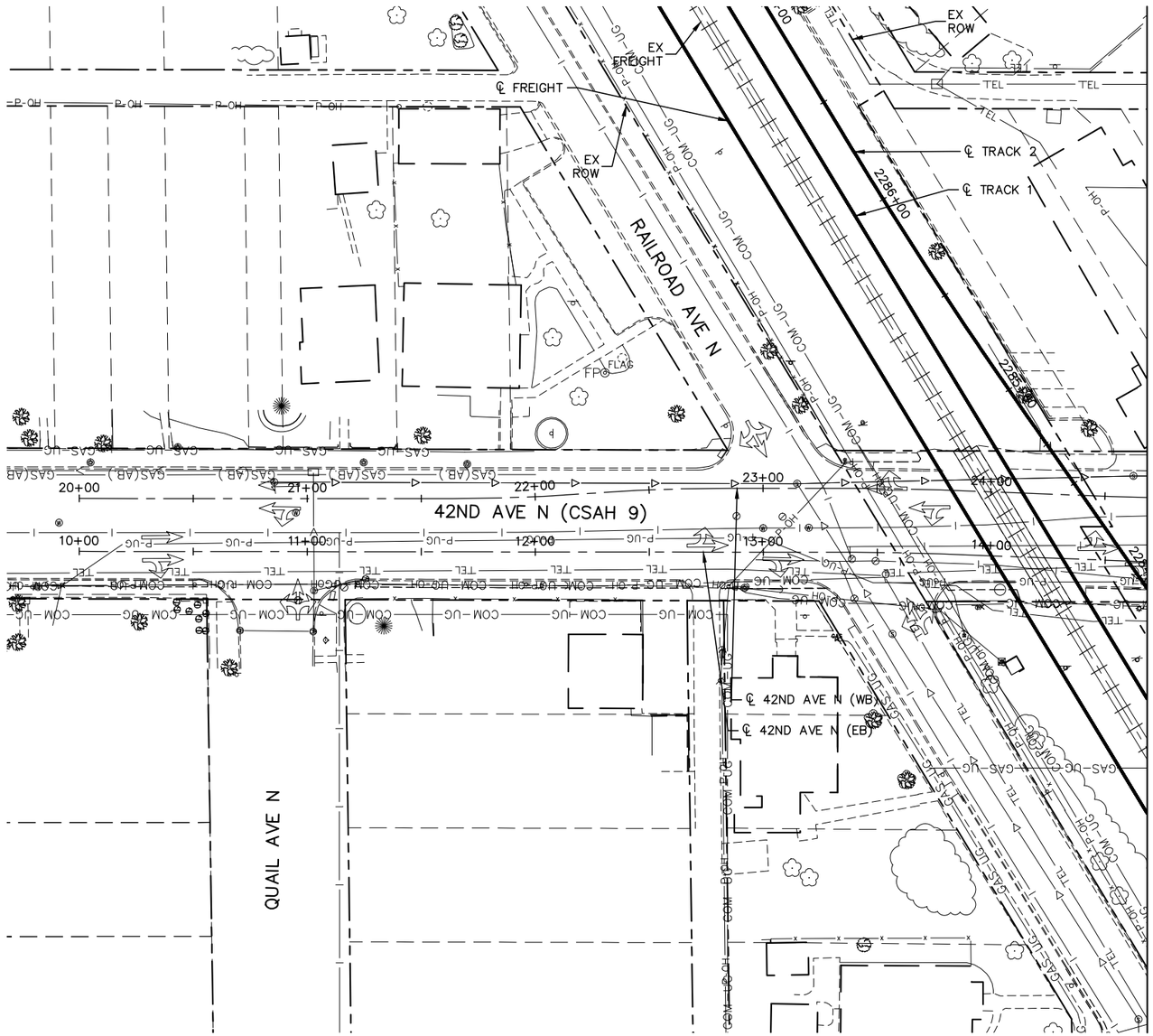
SEGMENT R
NOBLE AVE N / 41ST AVE N
EXISTING CONDITIONS
STA 10+00 TO STA 15+05

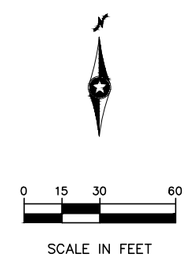
DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-024

SHEET 28 OF 93

Dec, 07 2015 03:29 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

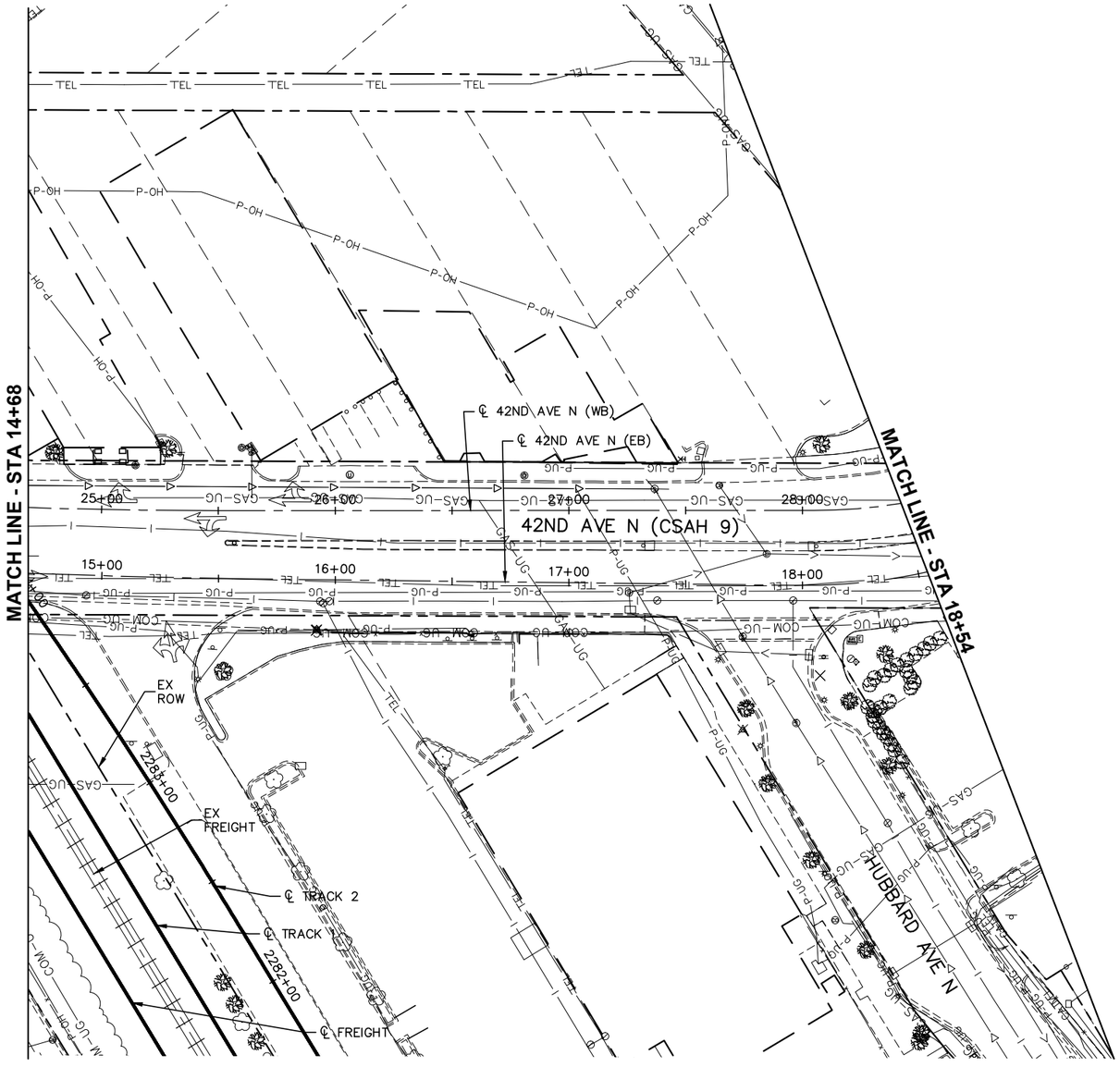
SEGMENT R
42ND AVE
EXISTING CONDITIONS
STA 10+00 TO STA 14+68

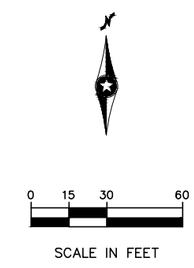
DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-025

SHEET 29 OF 93

Dec, 07 2015 03:29 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION
Bottineau LRT

METROPOLITAN COUNCIL

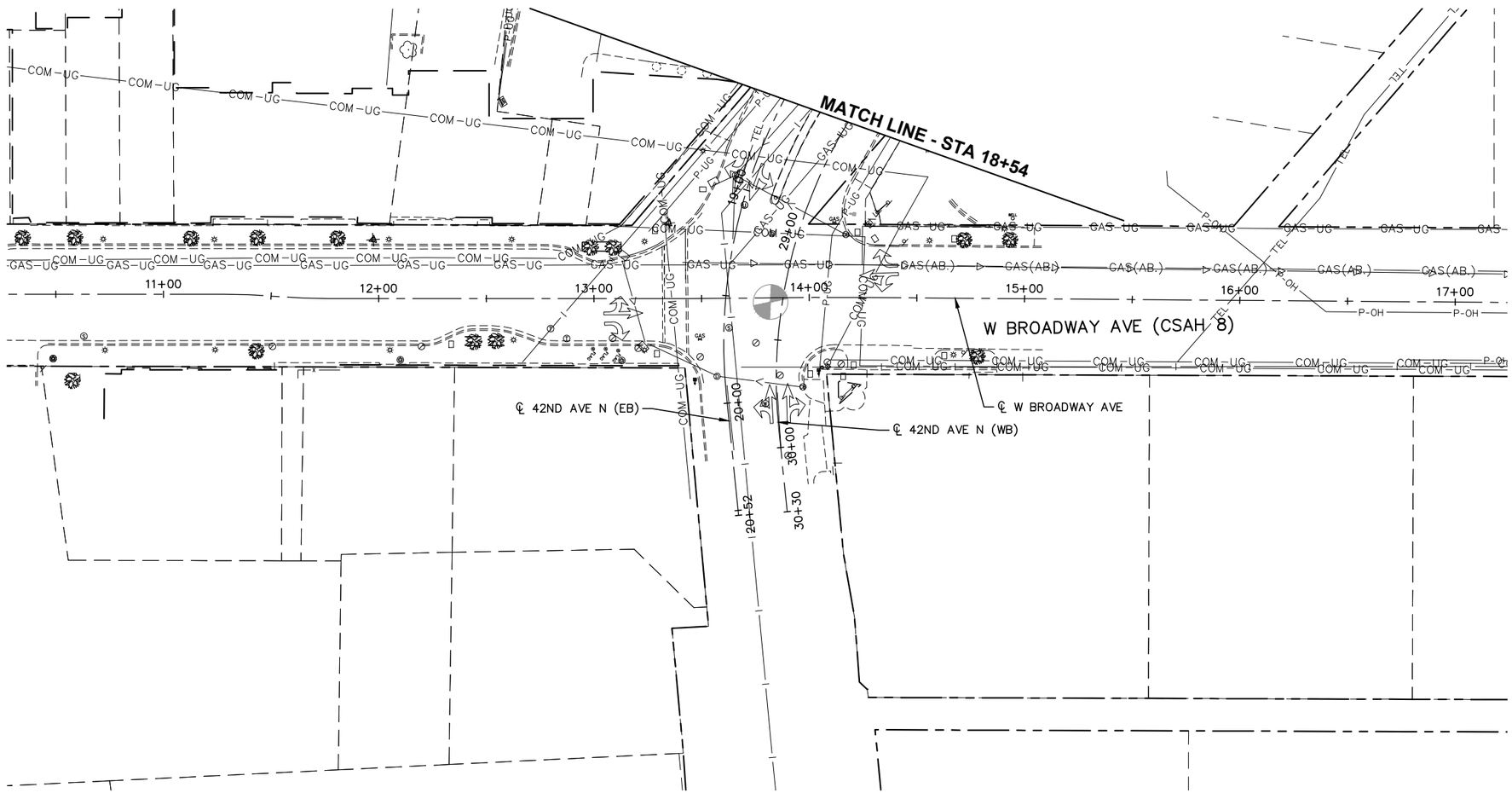
SEGMENT R
42ND AVE
EXISTING CONDITIONS
STA 14+68 TO STA 18+54

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-026

SHEET 30 OF 93

Dec, 07 2015 03:30 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION
Bottineau LRT

METROPOLITAN COUNCIL

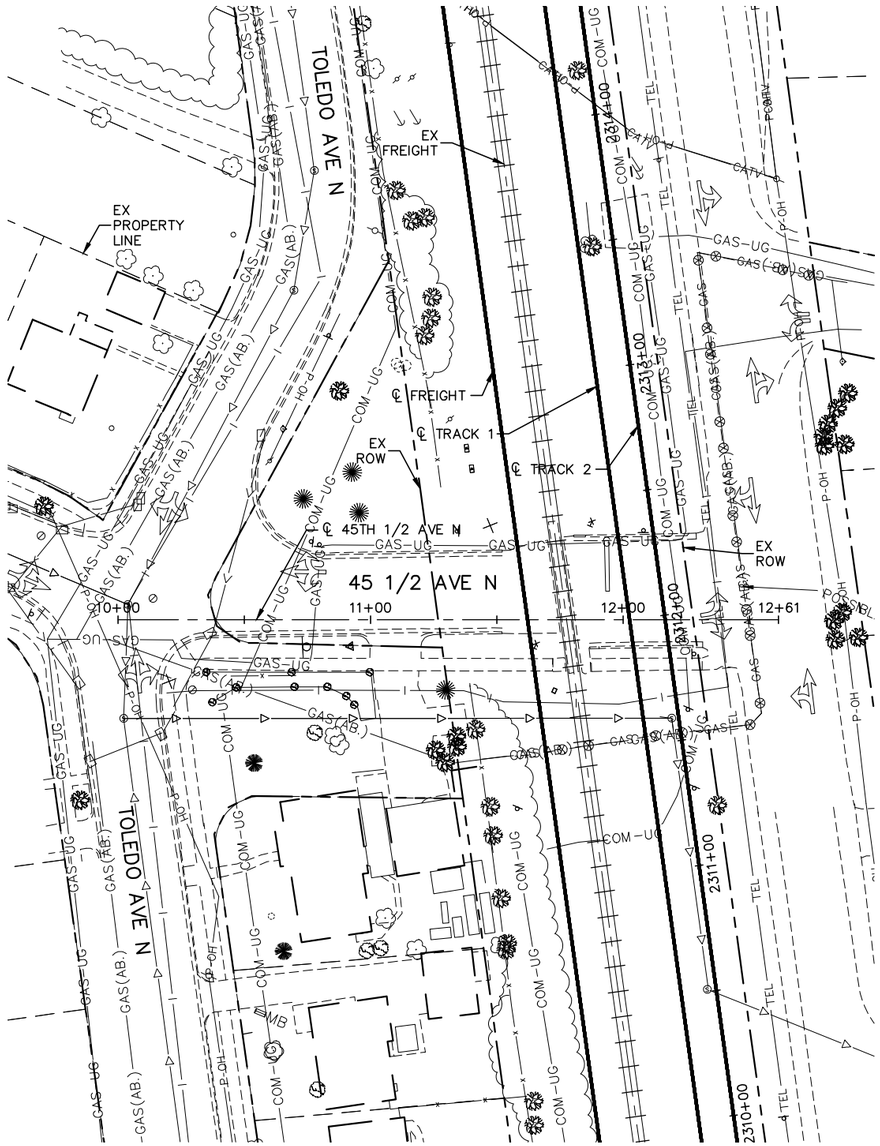
SEGMENT R
W BROADWAY AVE (CSAH 8)
EXISTING CONDITIONS
STA 10+00 TO STA 17+24

DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-027

SHEET 31 OF 93

Dec, 07 2015 03:31 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda



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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

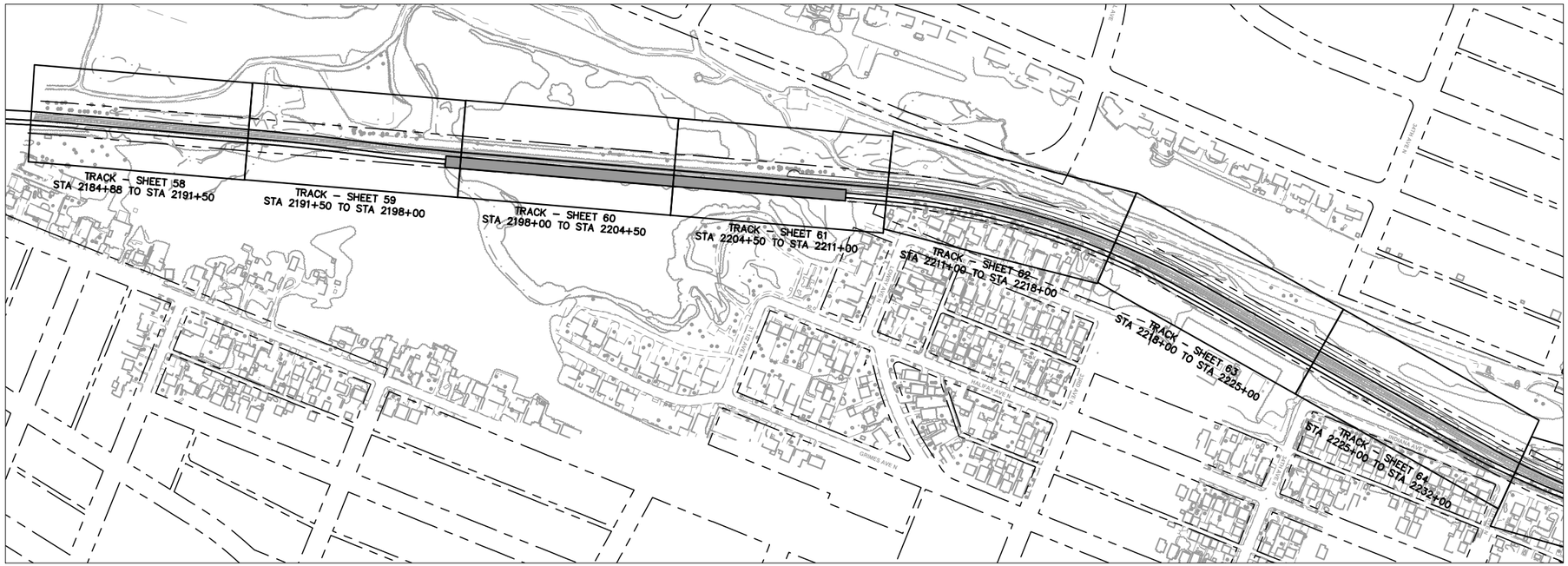
SEGMENT R
45TH 1/2 AVE
EXISTING CONDITIONS
STA 10+00 TO STA 12+61

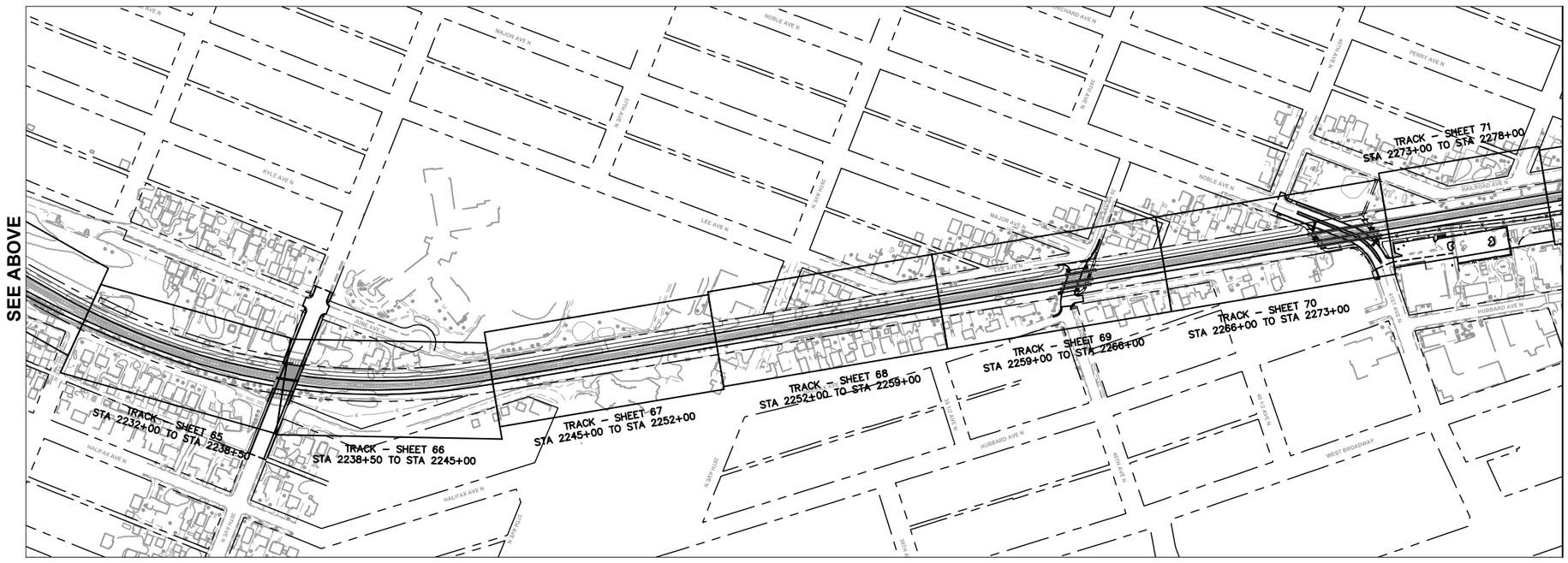
DISCIPLINE: SURVEY

SHEET NAME: R-EXCON-PLN-028

SHEET 32 OF 93

Dec, 07 2015 03:31 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-EXCON-PLN.dwg By: Newbauda





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SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
TRACK
SHEET LAYOUT INDEX

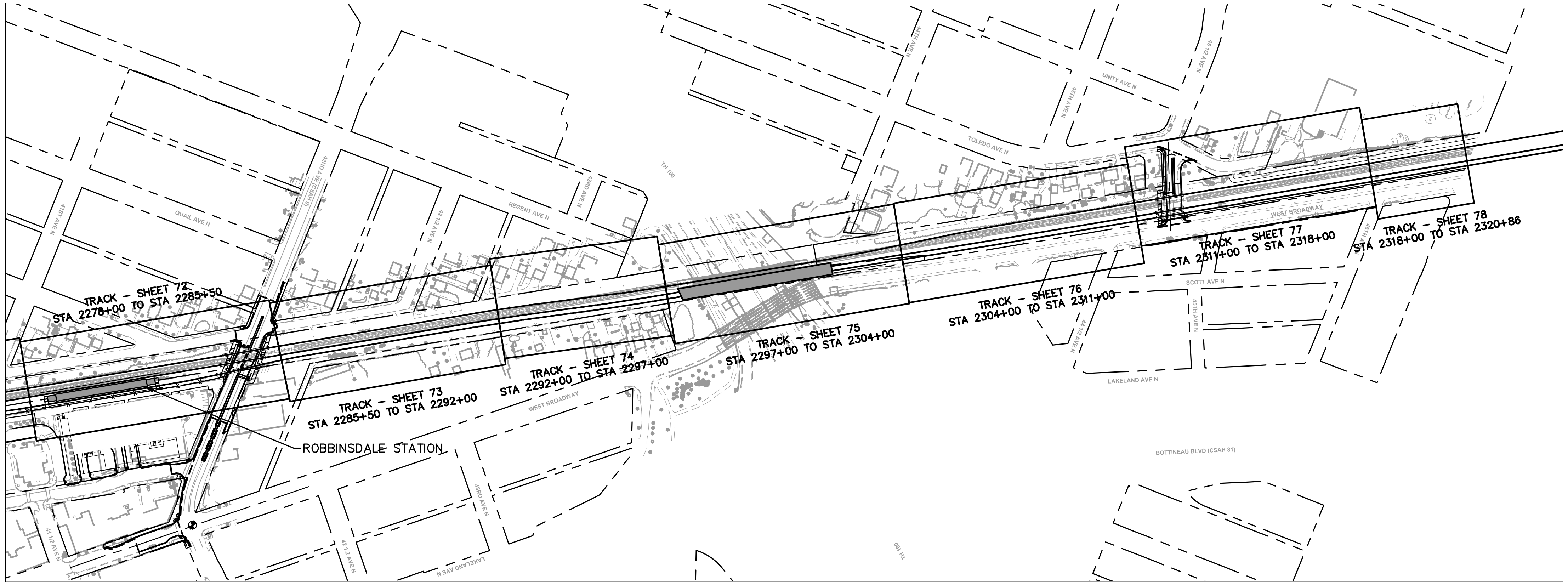
DISCIPLINE: TRACK

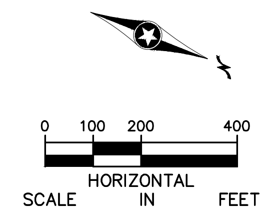
SHEET NAME: R-TRK-IDX-001

SHEET 33 OF 93

Dec, 03 2015 02:37 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-IDX.dwg By: V-Prudho

SEE SHEET 33





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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

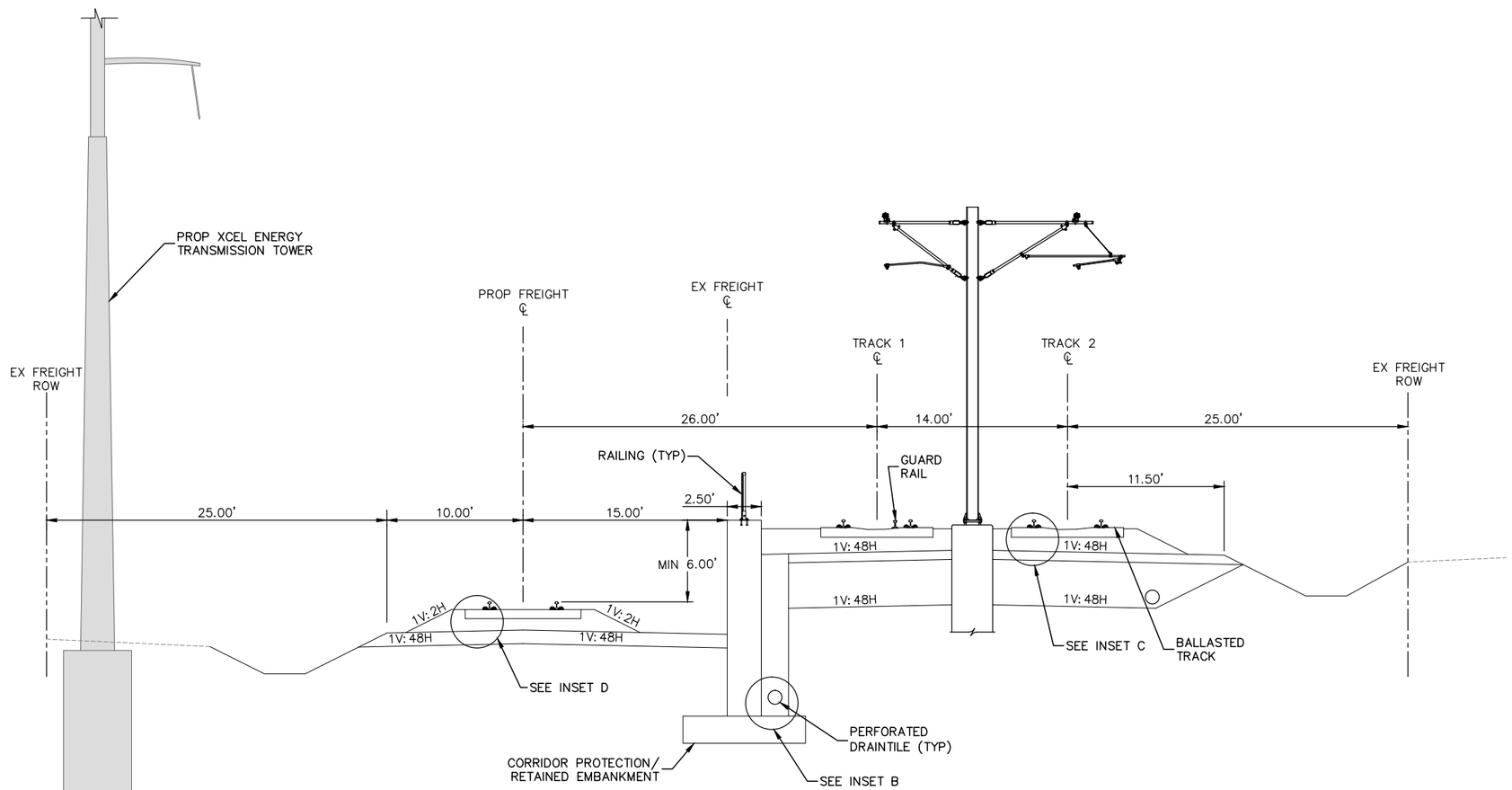
SEGMENT R
TRACK
SHEET LAYOUT INDEX

DISCIPLINE: TRACK

SHEET NAME: R-TRK-IDX-002

SHEET 34 OF 93

Dec, 03 2015 02:37 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-IDX.dwg By: V-Prudho



TYPICAL SECTION

STA. 2184+88 (BEGINNING OF SEGMENT R) TO 2186+30

NOTE:
1. FOR INSETS, SEE SHEET 57
2. XCEL TRANSMISSION TOWERS TO BE SHIFTED TO WEST SIDE OF BNSF ROW
3. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
4. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10

SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

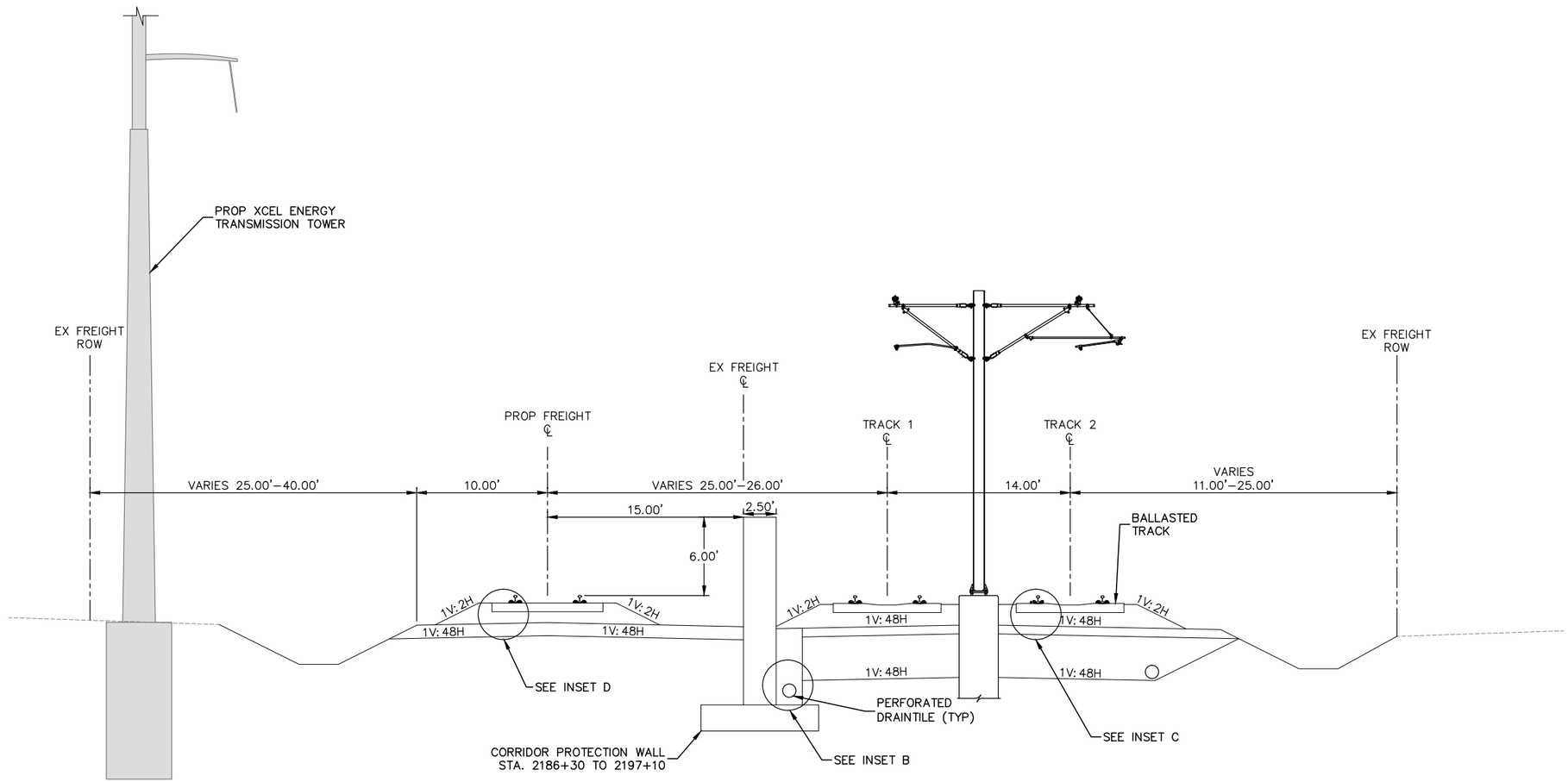
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-001

SHEET 35 OF 93

Dec, 03 2015 02:38 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2186+30 TO 2197+55

NOTE:
1. FOR INSETS, SEE SHEET 57
2. XCEL TRANSMISSION TOWERS TO BE SHIFTED TO WEST SIDE OF BNSF ROW
3. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
4. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

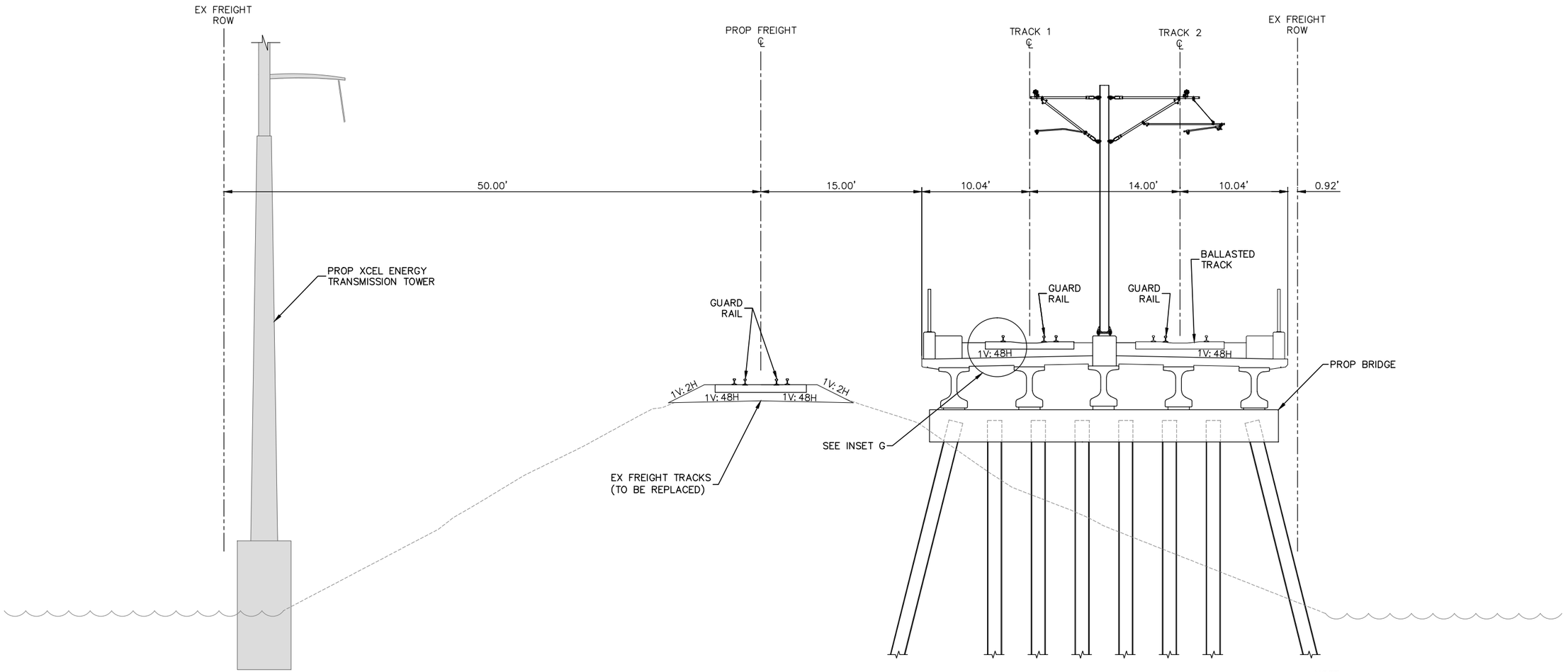
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: **TRACK**
SHEET NAME: **R-TRK-TYPS-002**

SHEET **36** OF **93**

Dec, 03 2015 02:39 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
LRT BRIDGE OVER GRIMES POND
STA. 2197+55 TO 2209+76

NOTE:
1. FOR INSETS, SEE SHEET 57
2. XCEL TRANSMISSION TOWERS TO BE SHIFTED TO WEST SIDE OF BNSF ROW
3. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

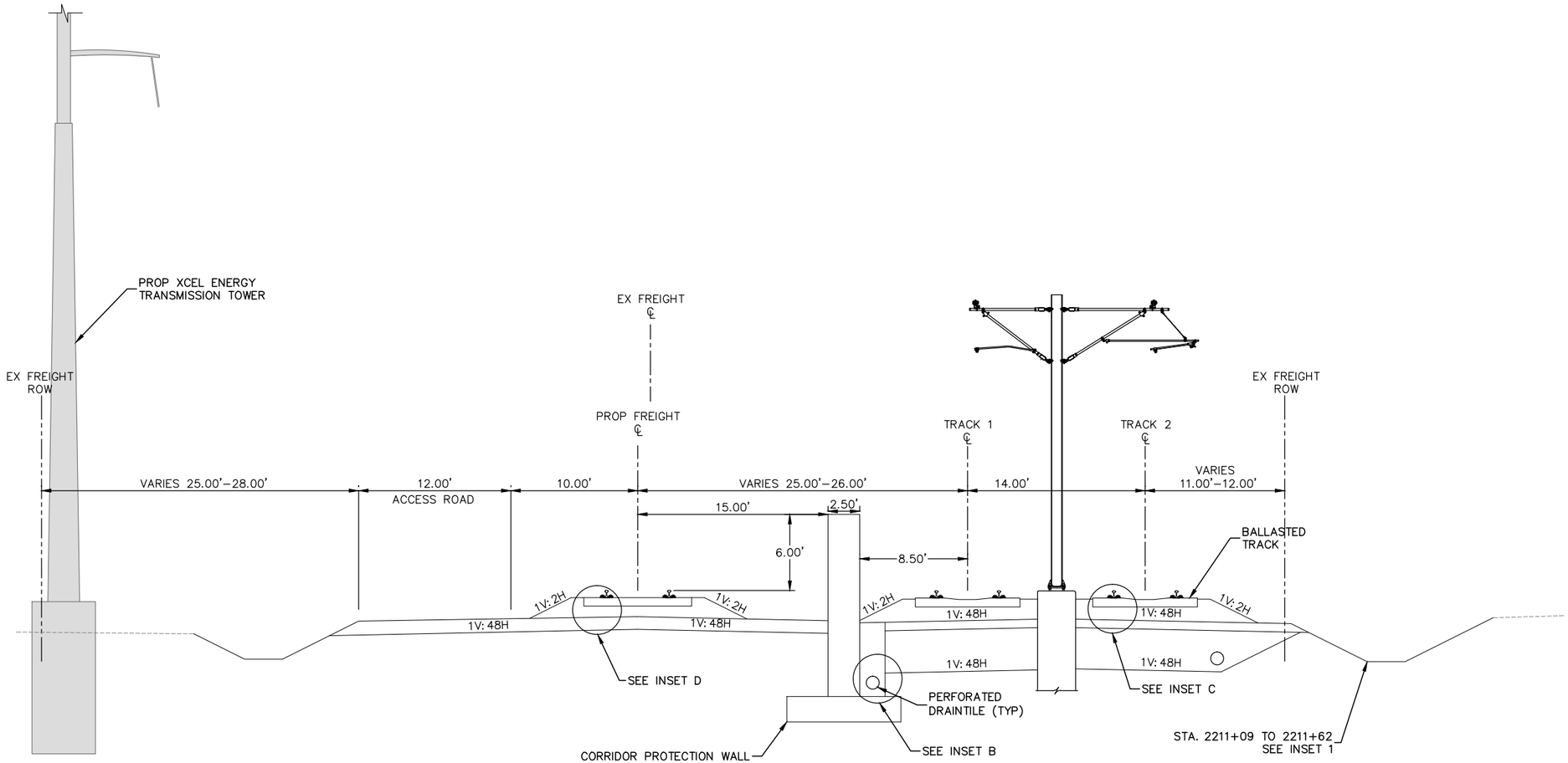
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

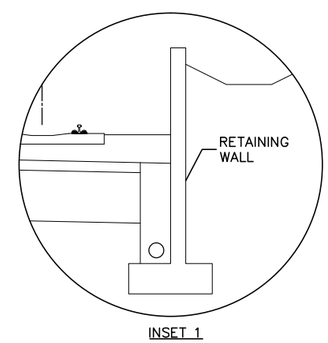
DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-003

SHEET 37 OF 93

Dec, 03 2015 02:39 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2209+76 TO 2211+62



INSET 1

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

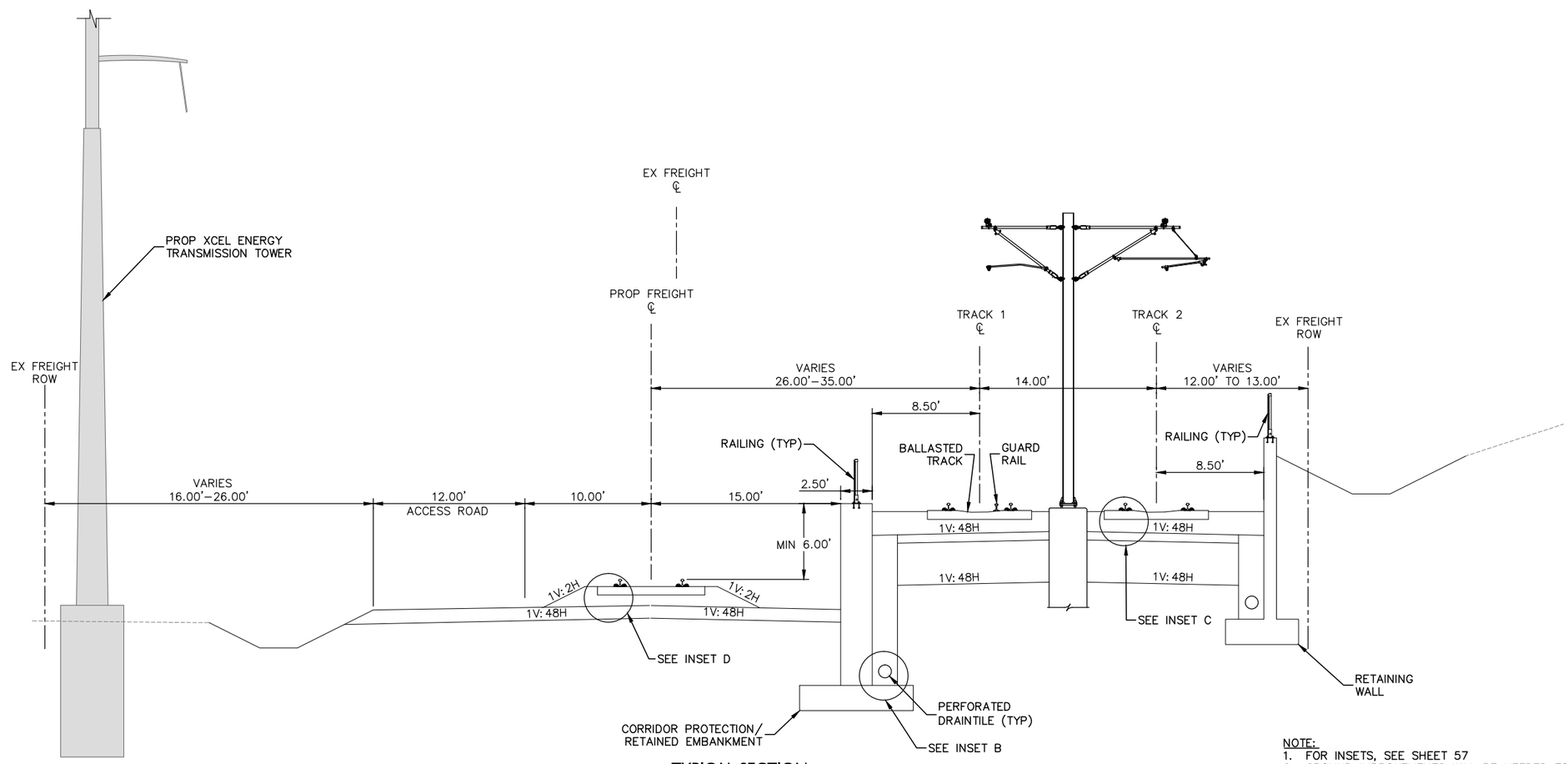
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-004

SHEET 38 OF 93

Dec, 03 2015 05:20 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2211+62 TO 2218+32

NOTE:
1. FOR INSETS, SEE SHEET 57
2. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
3. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-005

SHEET 39 OF 93

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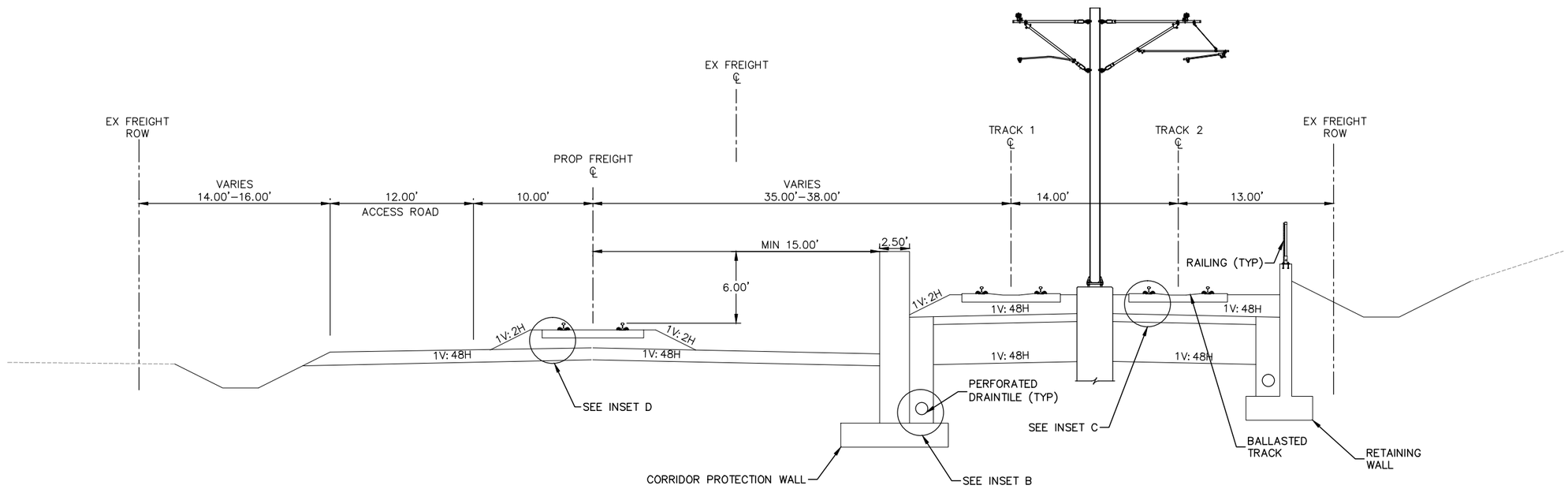


TYPICAL SECTION
STA. 2218+32 TO 2219+29

NOTE:
1. FOR INSETS, SEE SHEET 57
2. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
3. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

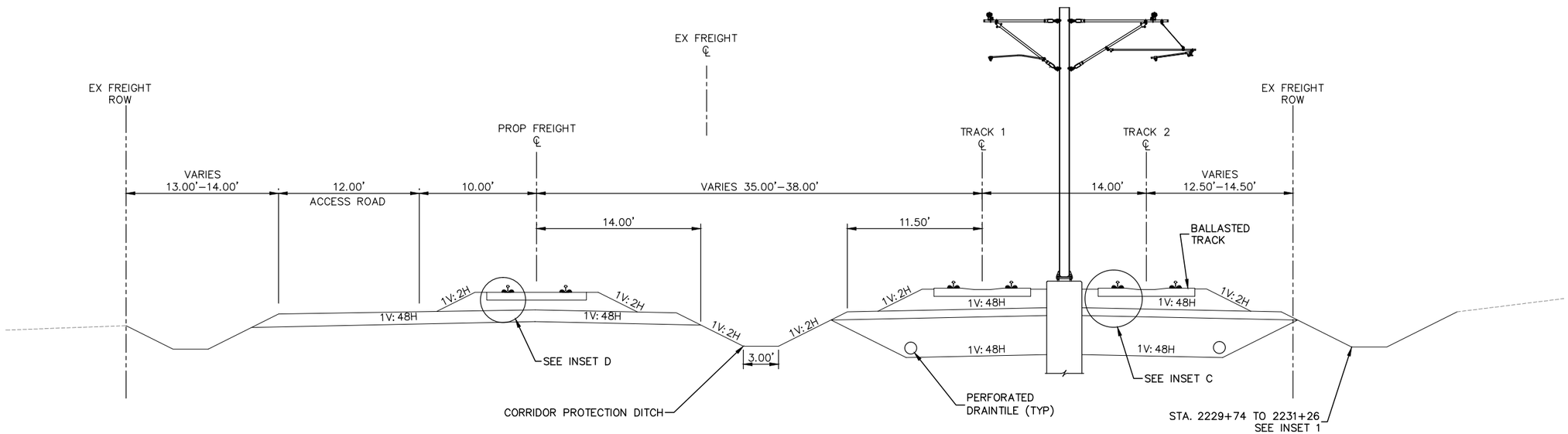
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

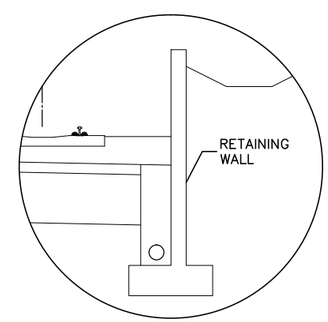
DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-006

SHEET 40 OF 93

Dec, 03 2015 02:41 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2219+29 TO 2231+26



INSET 1

NOTE:
1. FOR INSETS, SEE SHEET 57
2. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
3. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

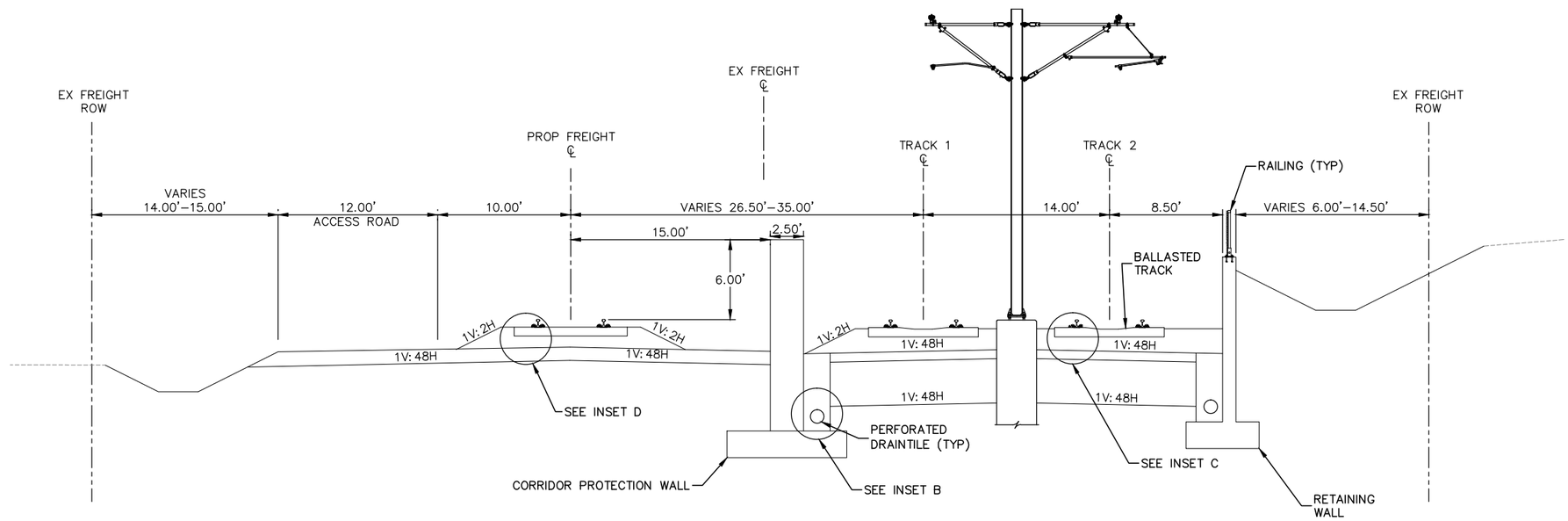
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-007

SHEET 41 OF 93

Dec, 03 2015 02:41 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2231+26 TO 2234+11

NOTE:
1. FOR INSETS, SEE SHEET 57
2. GROUND IMPROVEMENTS WILL BE NEEDED TO MITIGATE THE EXISTING WEAK AND COMPRESSIBLE SOILS IN THIS SEGMENT
3. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

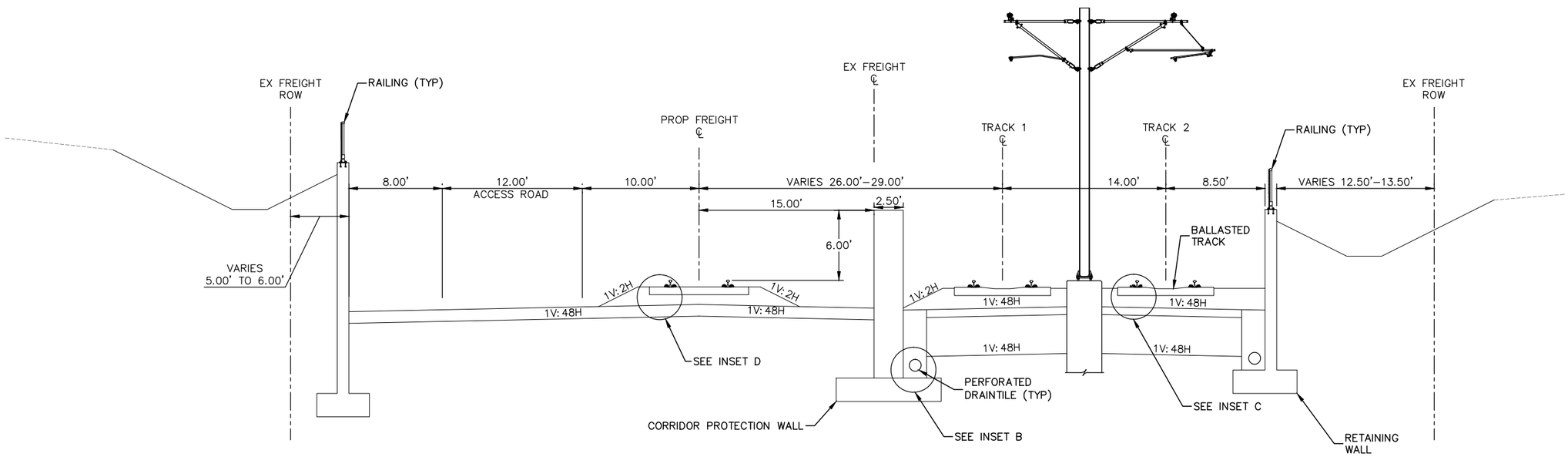
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-008

SHEET 42 OF 93

Dec, 03 2015 02:42 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2234+11 TO 2238+20

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

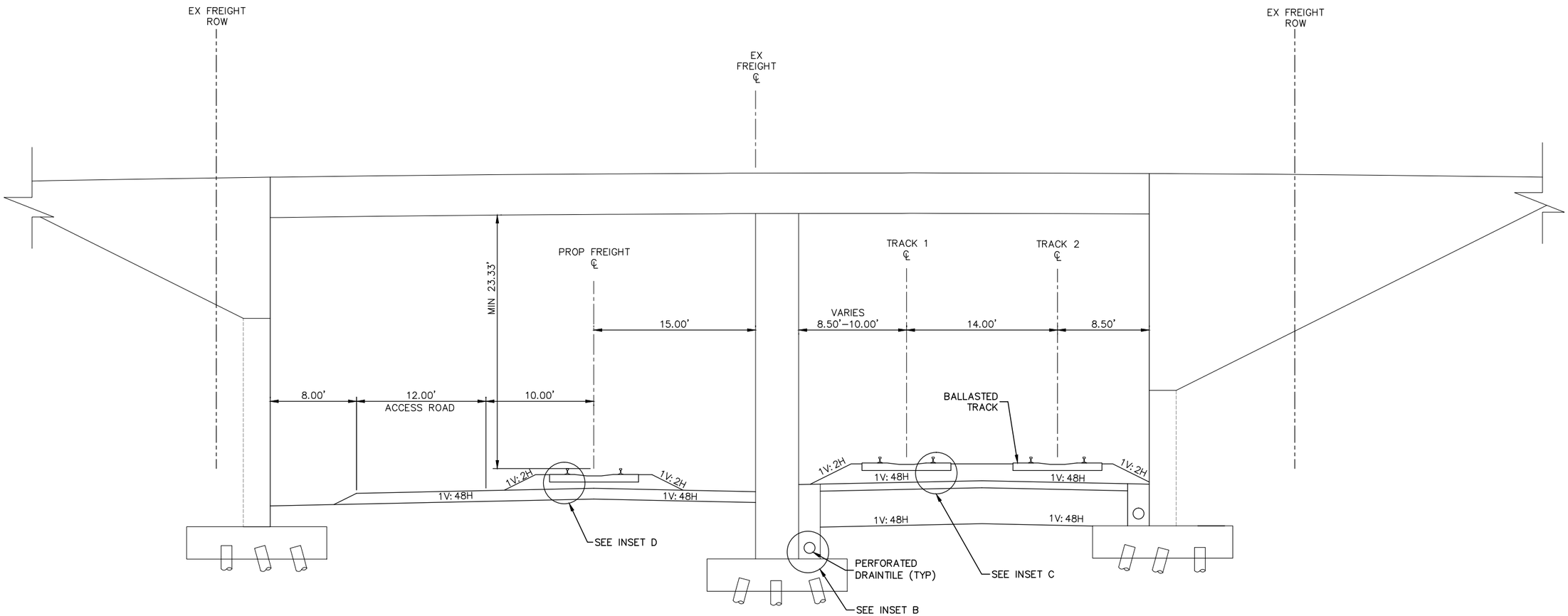
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-009

SHEET 43 OF 93

Dec, 03 2015 02:42 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
36TH AVENUE BRIDGE
STA. 2238+20 TO 2238+83

NOTE:
1. FOR INSETS, SEE SHEET 57
2. OCS NOT DEPICTED
3. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

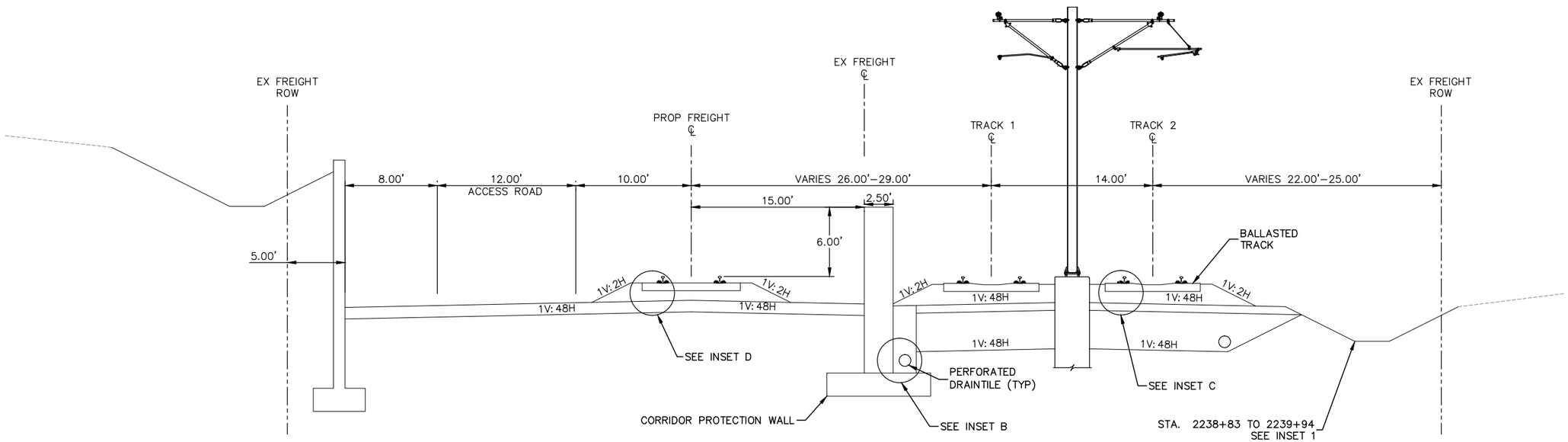
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

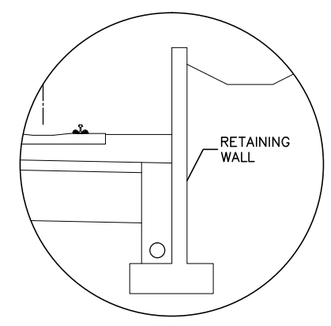
SHEET NAME: R-TRK-TYPS-010

SHEET 44 OF 93

Dec, 03 2015 02:43 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2238+83 TO 2245+21



INSET 1

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

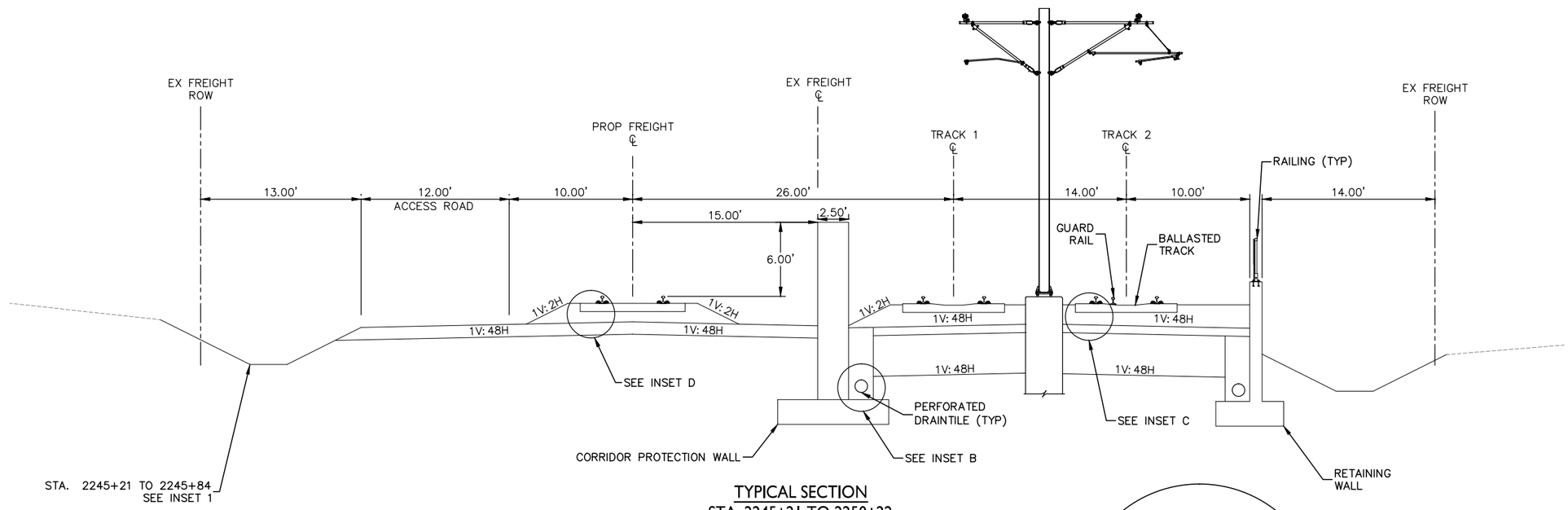
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

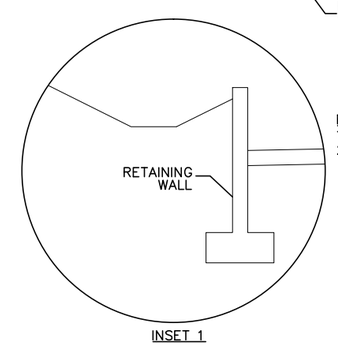
SHEET NAME: R-TRK-TYPS-011

SHEET 45 OF 93

Dec, 03 2015 02:43 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2245+21 TO 2250+22



INSET 1

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

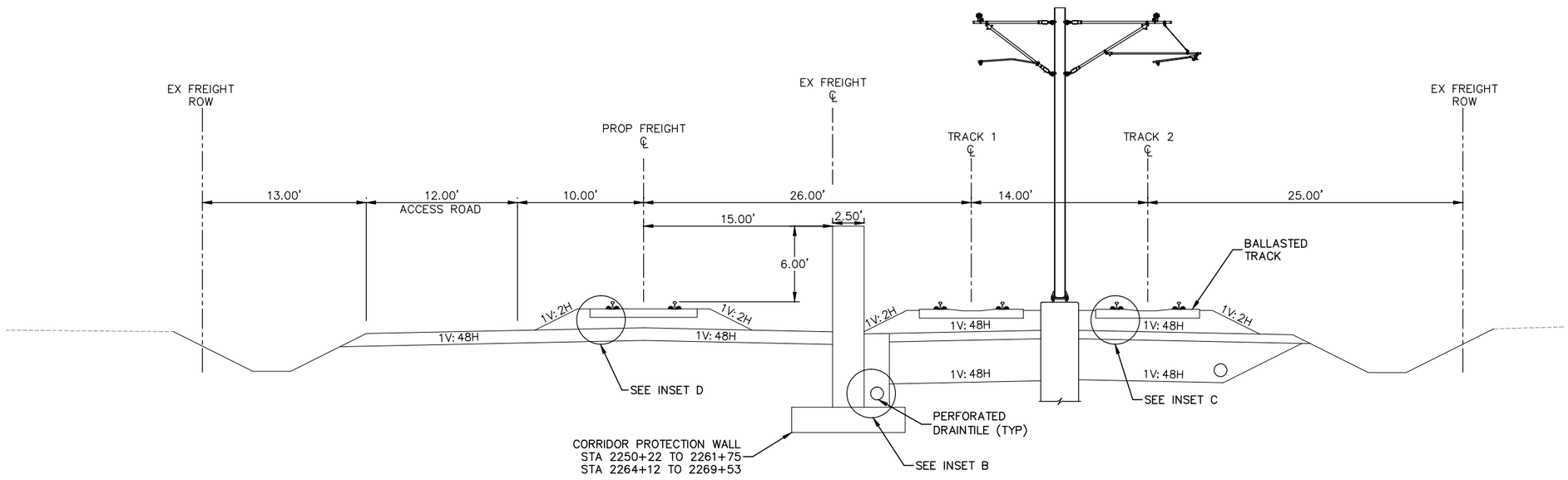
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-012

SHEET 46 OF 93

Dec, 03 2015 02:44 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2250+22 TO 2269+53

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT-OF-WAY NOT DETERMINED
3. LIMITS OF SECTION INCLUDE AT-GRADE CROSSINGS THAT ARE NOT DEPICTED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

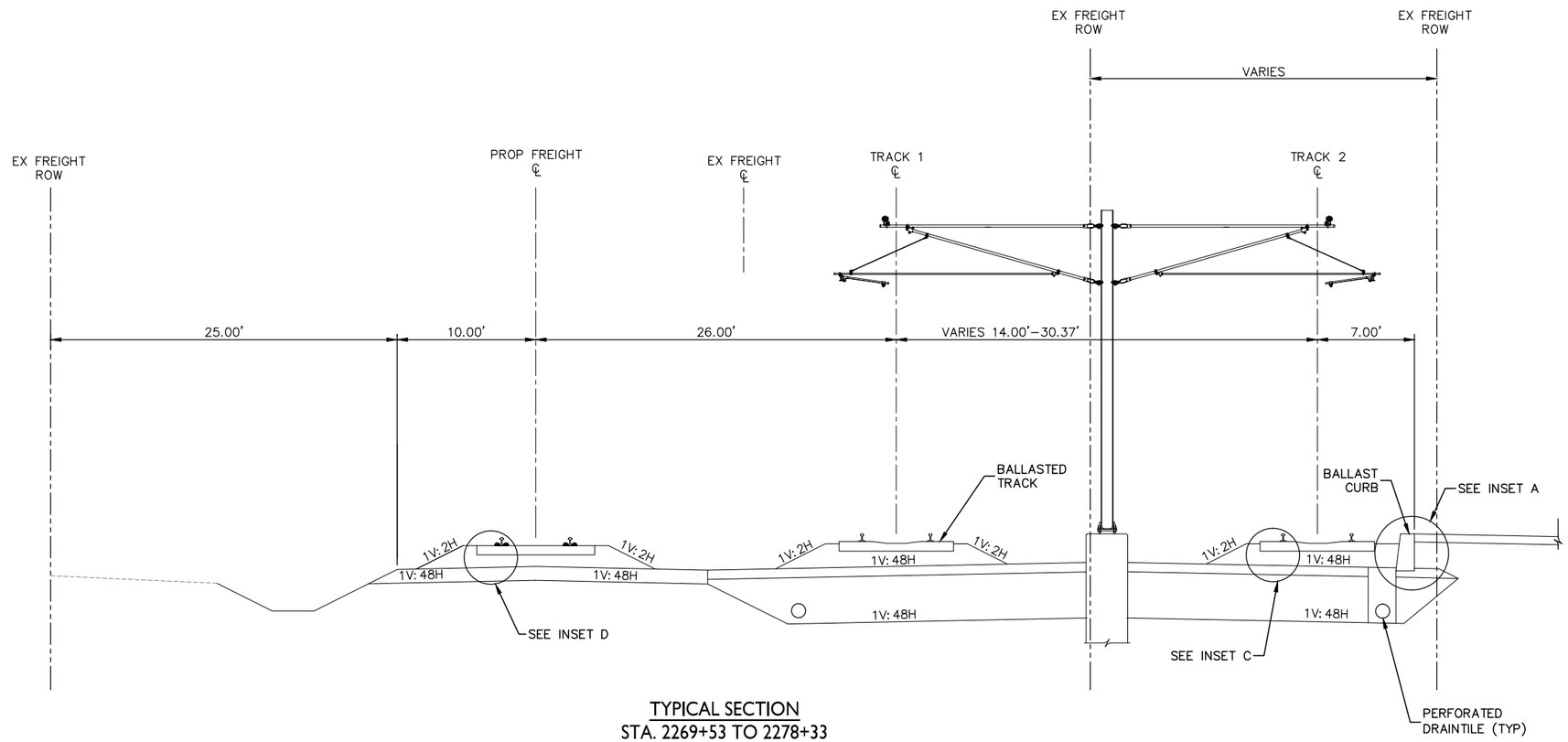
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-013

SHEET 47 OF 93

Dec. 03 2015 02:44 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2269+53 TO 2278+33

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED
3. LIMITS OF SECTION INCLUDE AT–GRADE CROSSINGS THAT ARE NOT DEPICTED
4. ACCESS ROAD NOT SHOWN STA. 2269+53 TO 2270+45

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

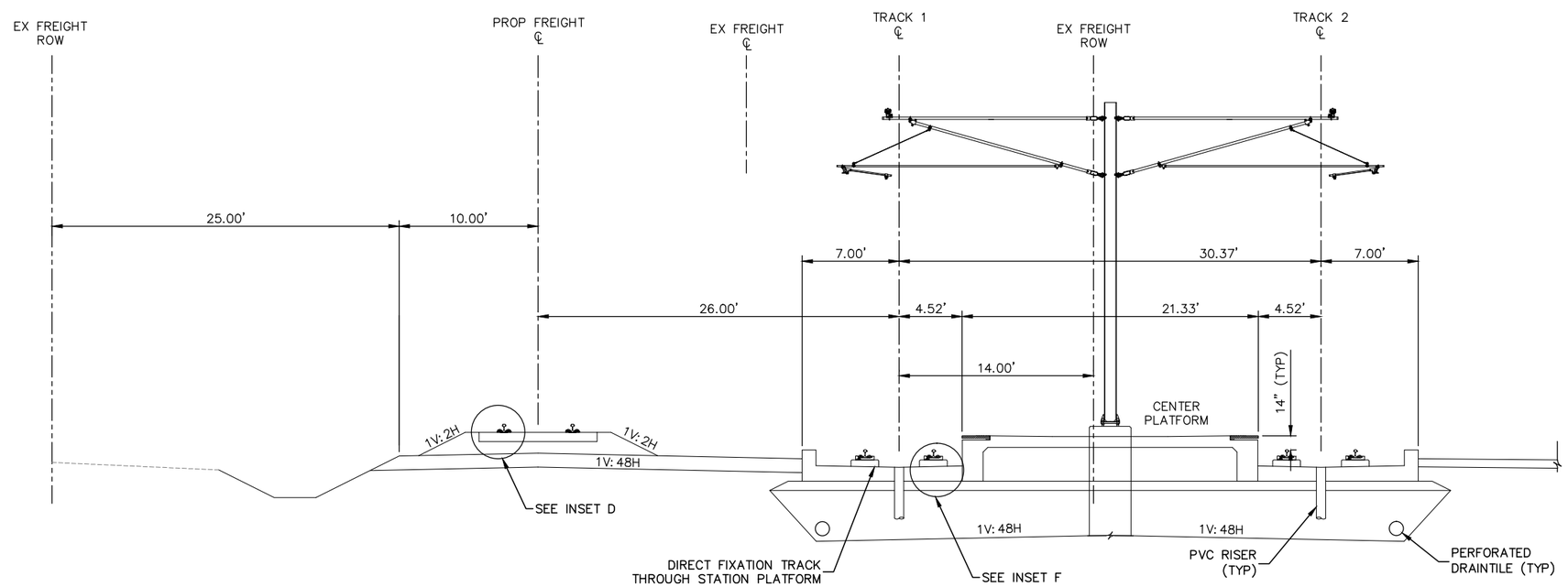
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-014

SHEET 48 OF 93

Dec, 03 2015 02:45 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
ROBBINSDALE STATION
STA. 2278+33 to 2281+93

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

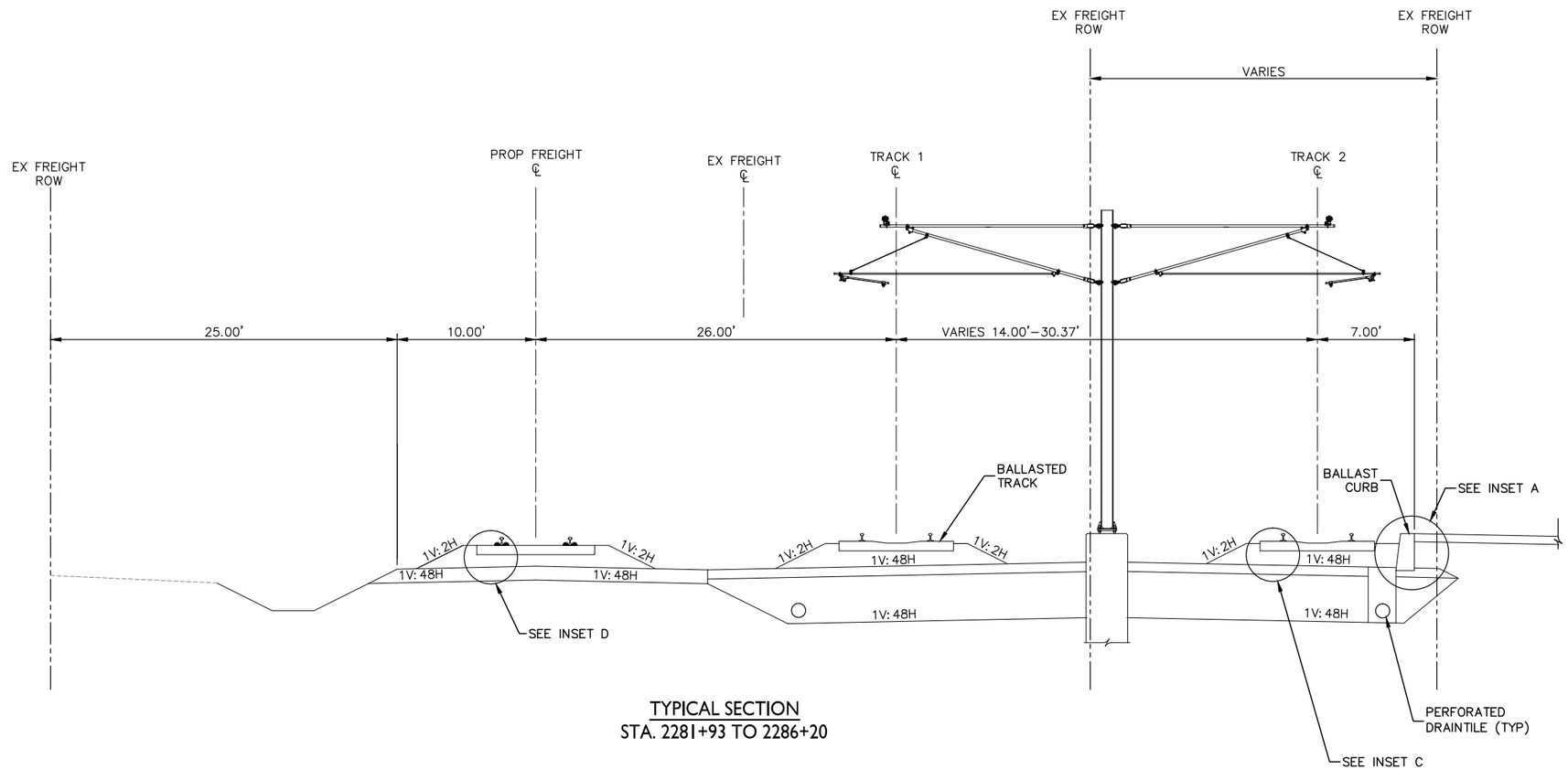
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-015

SHEET 49 OF 93

Dec, 03 2015 02:46 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2281+93 TO 2286+20

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED
3. LIMITS OF SECTION INCLUDE AT–GRADE CROSSINGS THAT ARE NOT DEPICTED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

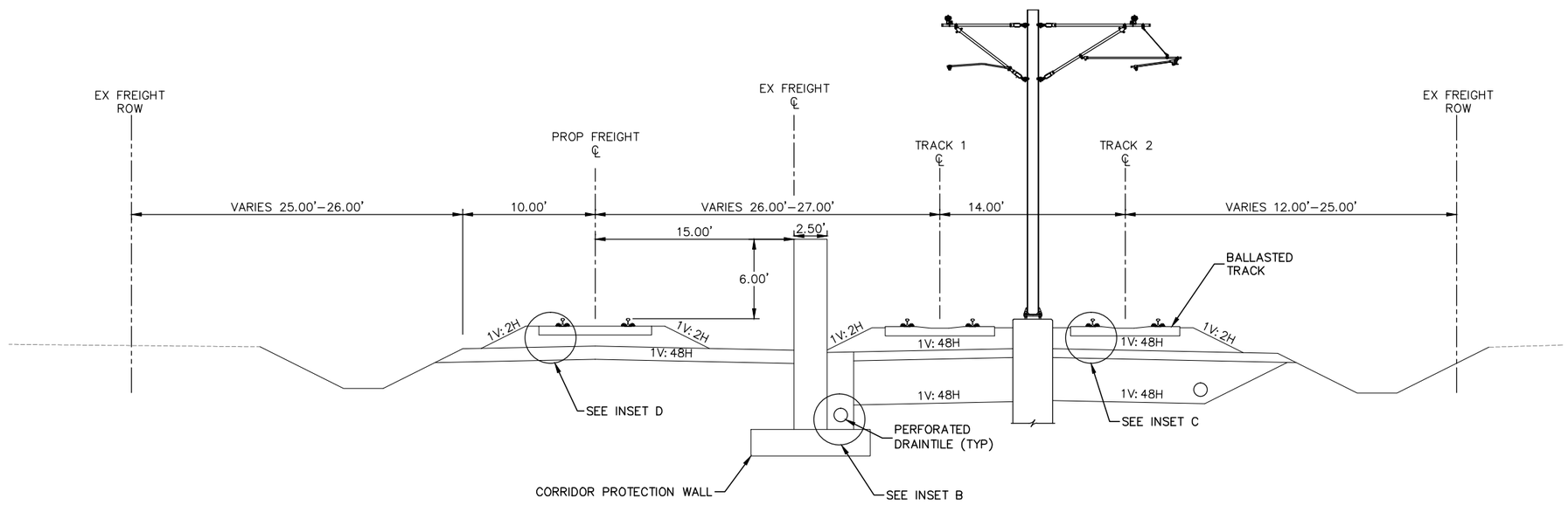
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-016

SHEET 50 OF 93

Dec, 03 2015 02:46 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2286+20 TO 2292+49

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

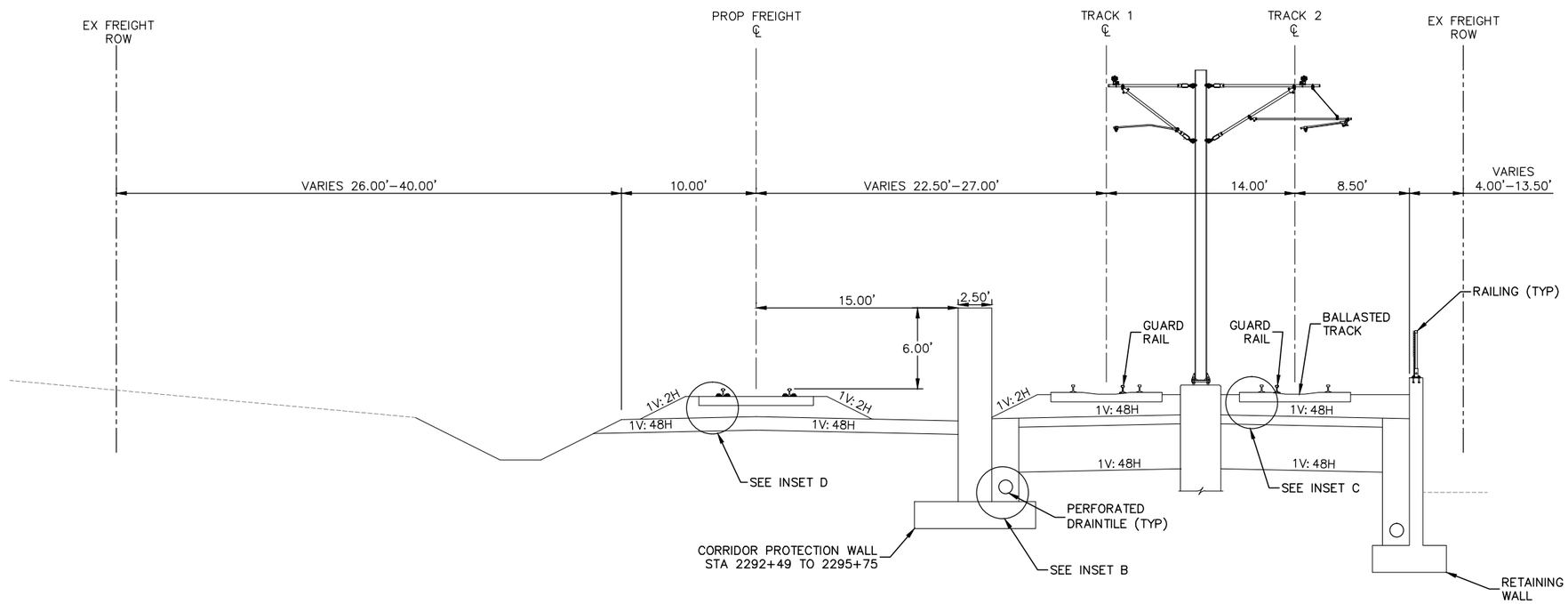
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK
SHEET NAME: R-TRK-TYPS-017

SHEET 51 OF 93

Dec, 03 2015 02:47 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2292+49 TO 2297+41

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

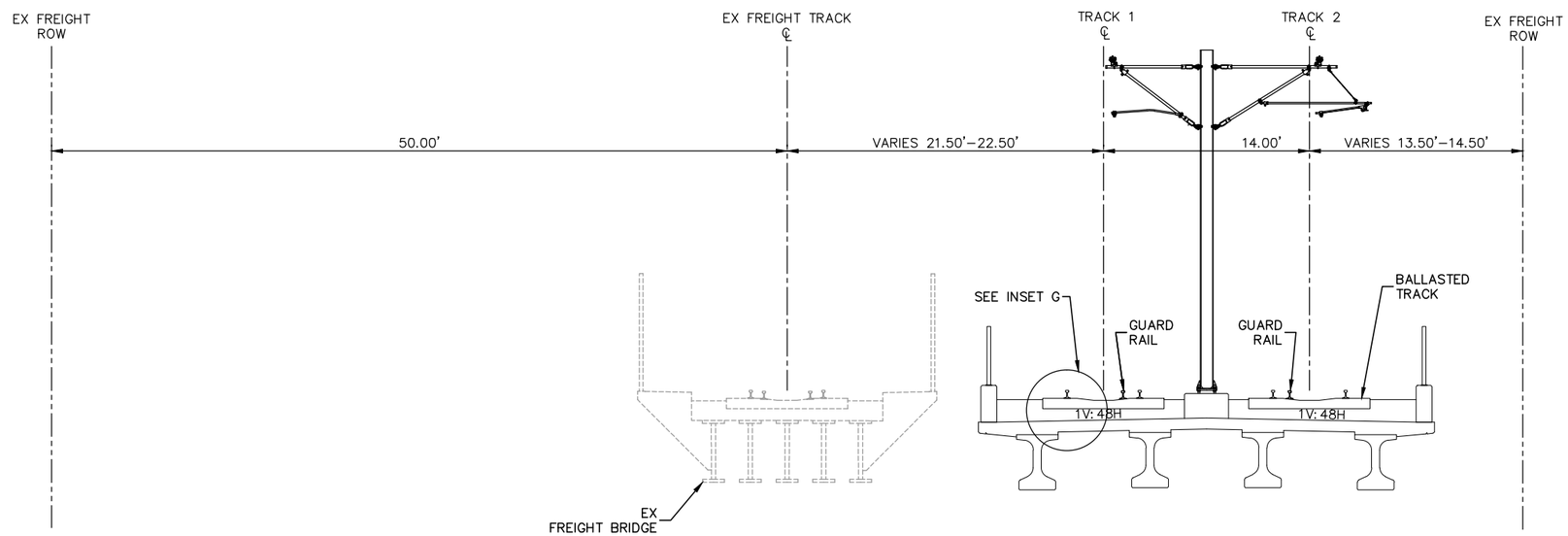
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: **TRACK**
SHEET NAME: **R-TRK-TYPS-018**

SHEET 52 OF 93

Dec, 03 2015 02:47 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
BRIDGE OVER TH-100
STA. 2297+41 TO 2301+91

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

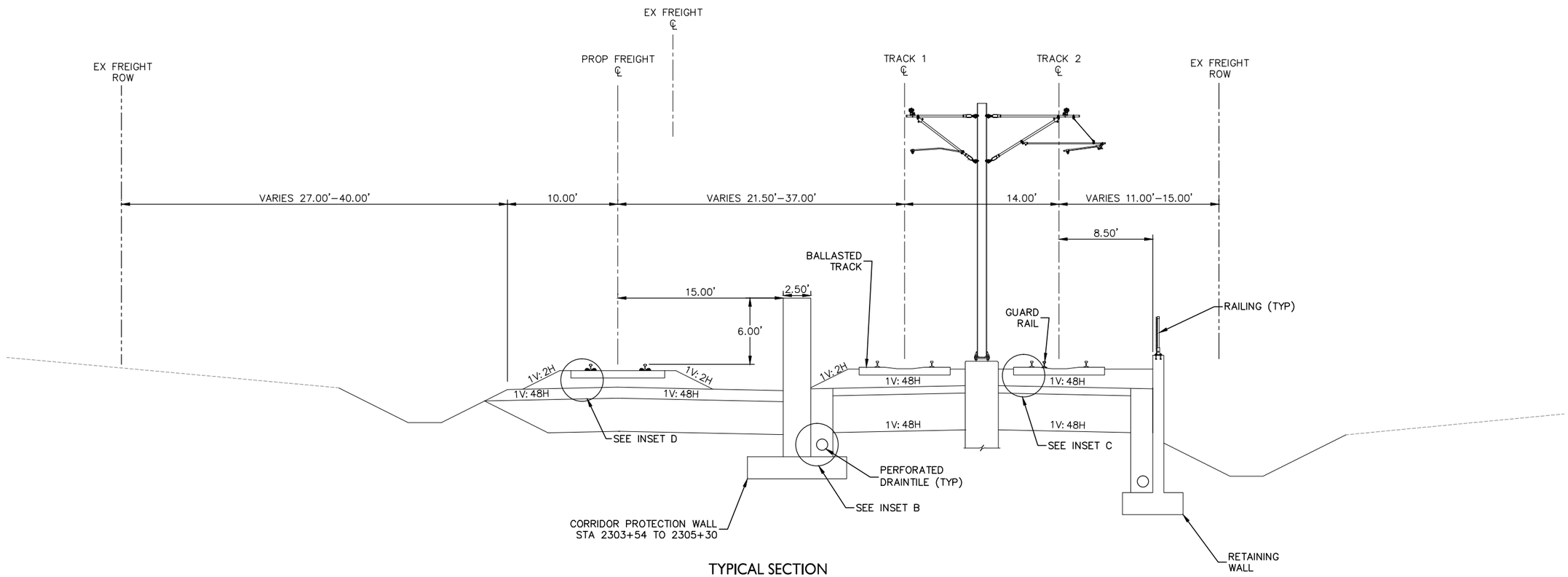
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-019

SHEET 53 OF 93

Dec, 03 2015 02:48 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2301+91 TO 2305+78

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

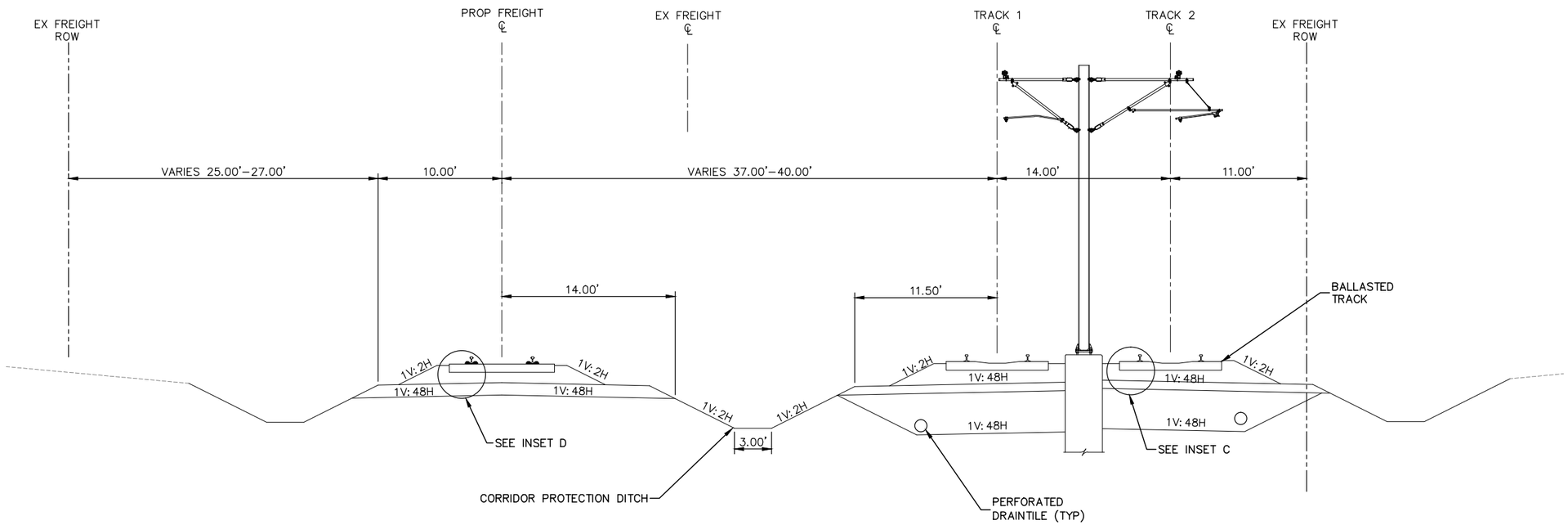
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: **TRACK**
SHEET NAME: **R-TRK-TYPS-020**

SHEET **54** OF **93**

Dec, 03 2015 02:48 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2305+78 TO 2313+87

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT–OF–WAY NOT DETERMINED
3. LIMITS OF SECTION INCLUDE AT–GRADE CROSSINGS THAT ARE NOT DEPICTED
4. BALLAST CURB NOT SHOWN STA. 2312+34 TO 2313+87

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

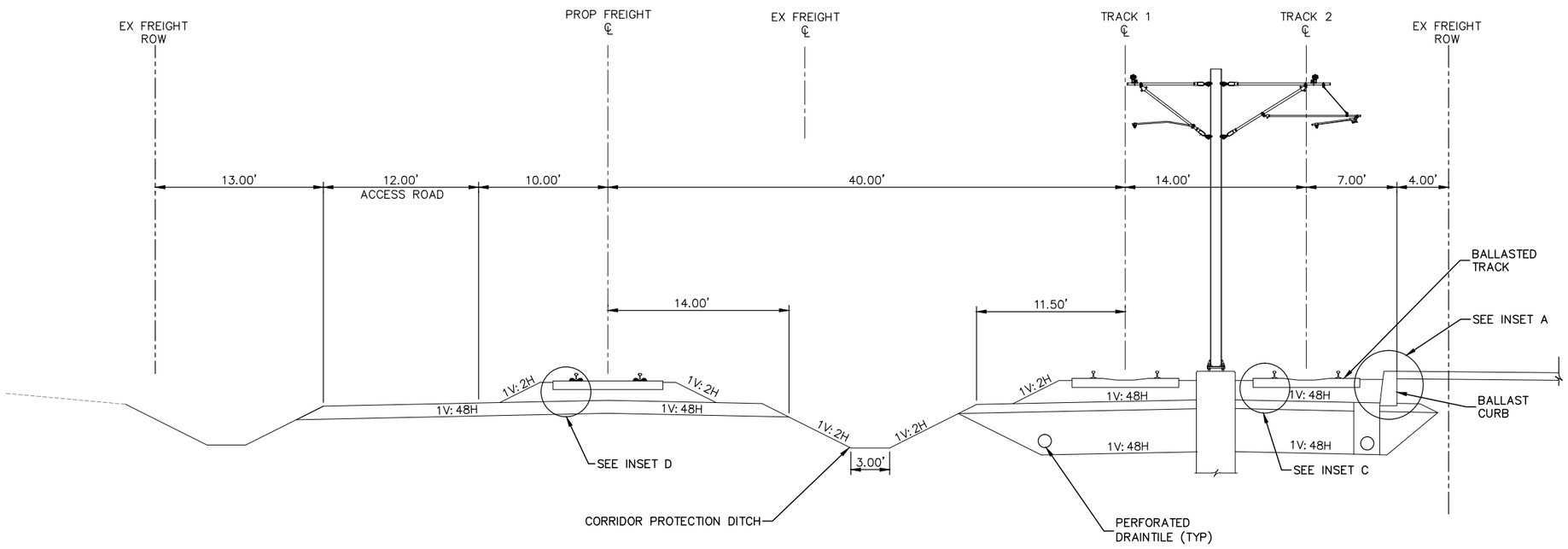
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-021

SHEET 55 OF 93

Dec, 07 2015 10:34 am H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



TYPICAL SECTION
STA. 2313+87 TO 2320+86 (SEGMENT R END)

NOTE:
1. FOR INSETS, SEE SHEET 57
2. PROPOSED RIGHT-OF-WAY NOT DETERMINED

0 5 10
SCALE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

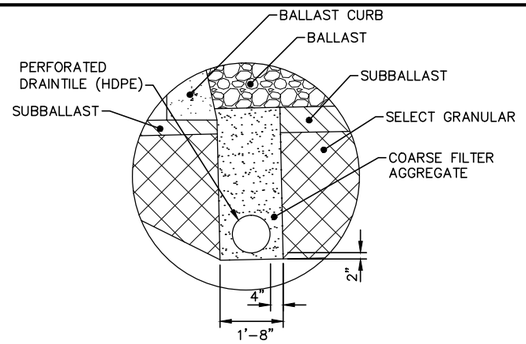
SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: TRACK

SHEET NAME: R-TRK-TYPS-022

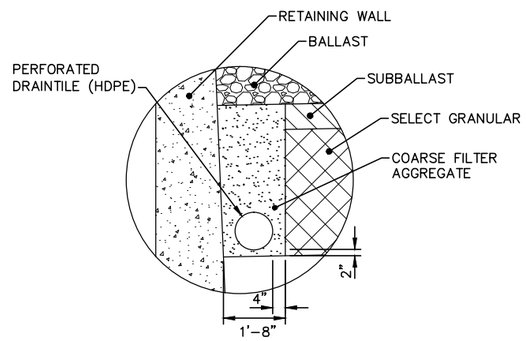
SHEET 56 OF 93

Dec, 03 2015 02:49 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



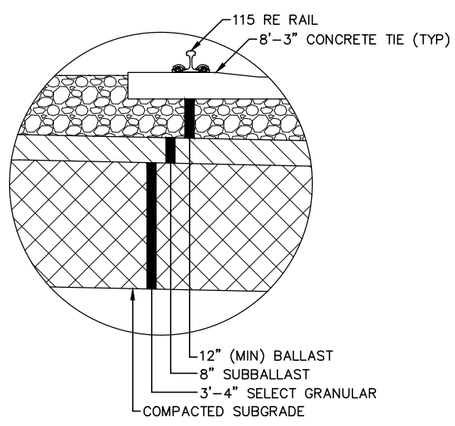
INSET A – BALLAST CURB INTERFACE

NOTE: LEFT SIDE DRAINAGE TRENCH ILLUSTRATED.
FOR RIGHT SIDE, MIRROR SECTION.

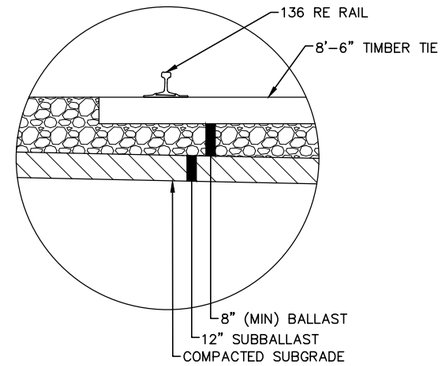


INSET B – RETAINING WALL INTERFACE

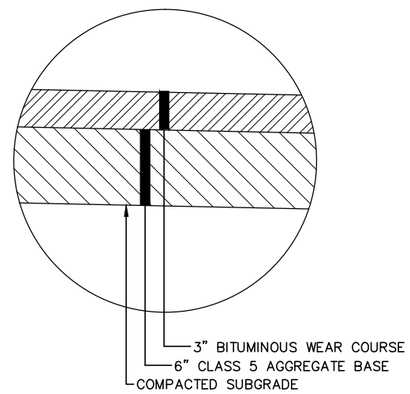
NOTE: LEFT SIDE DRAINAGE TRENCH ILLUSTRATED.
FOR RIGHT SIDE, MIRROR SECTION.



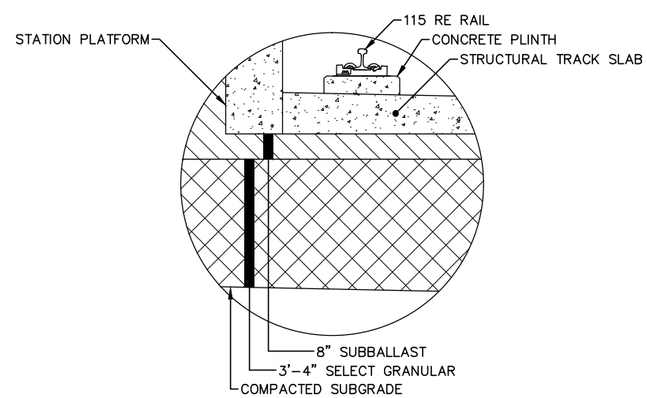
INSET C – TYPICAL BALLASTED TRACK



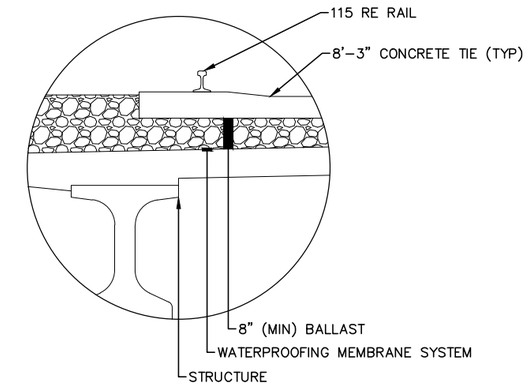
INSET D – TYPICAL BALLASTED FREIGHT TRACK



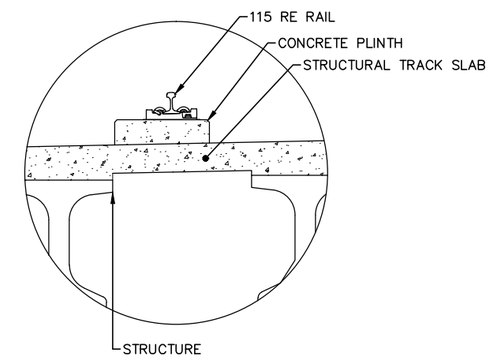
INSET E – TYPICAL TRAIL



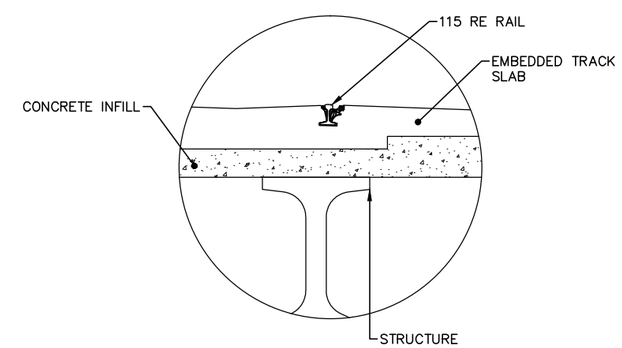
INSET F – TYPICAL DIRECT FIXATION INTERFACE AT STATION PLATFORM



INSET G – BALLASTED LRT TRACK ON STRUCTURE



INSET H – DIRECT FIXATION LRT TRACK ON STRUCTURE



INSET I – EMBEDDED LRT TRACK ON STRUCTURE

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

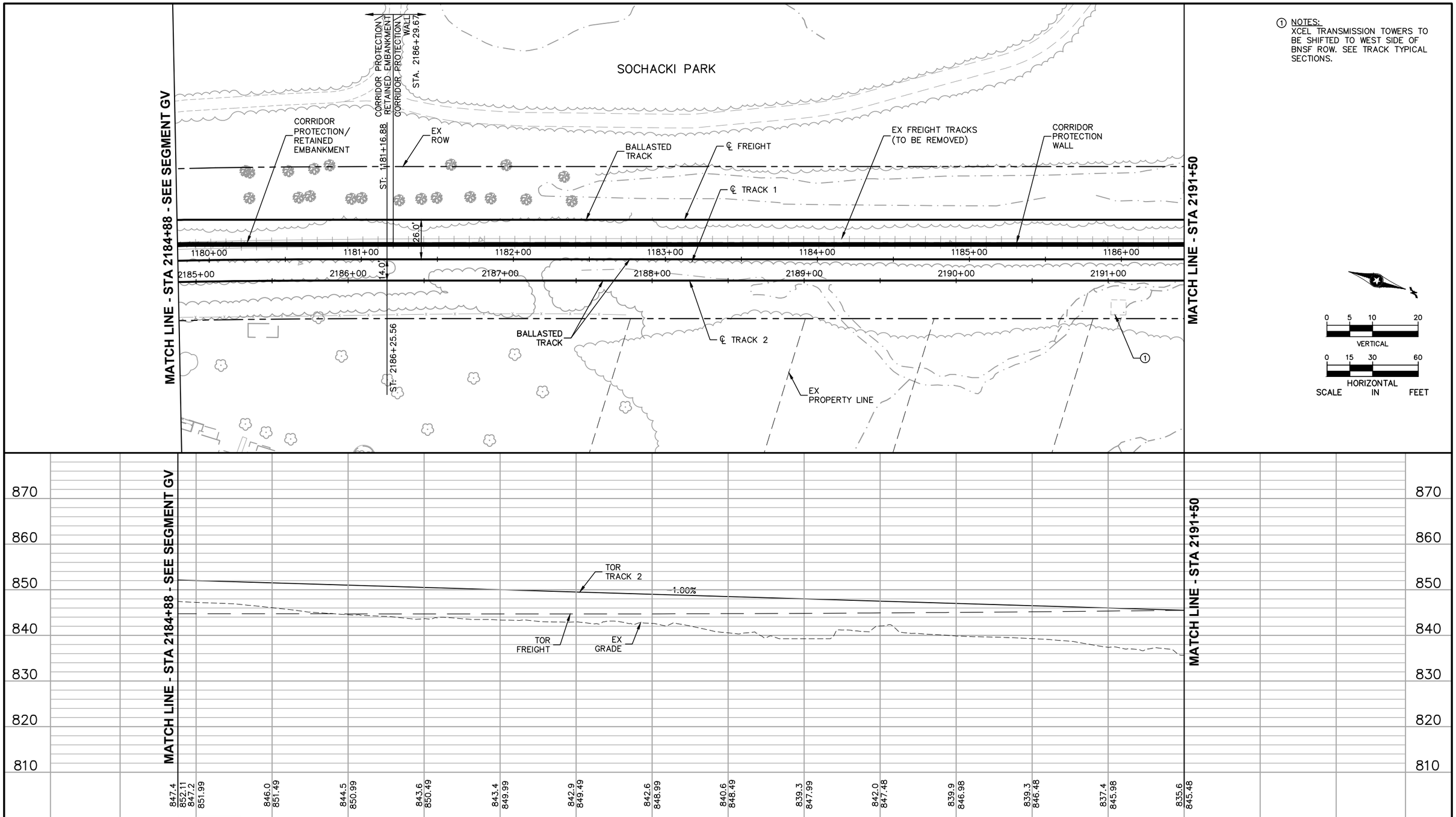
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
TRACK
TYPICAL SECTIONS

DISCIPLINE: **TRACK**
SHEET NAME: **R-TRK-TYPS-023**

SHEET **57** OF **93**

Dec, 03 2015 02:50 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-TYPS.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2184+88 TO STA 2191+50

DISCIPLINE: TRACK

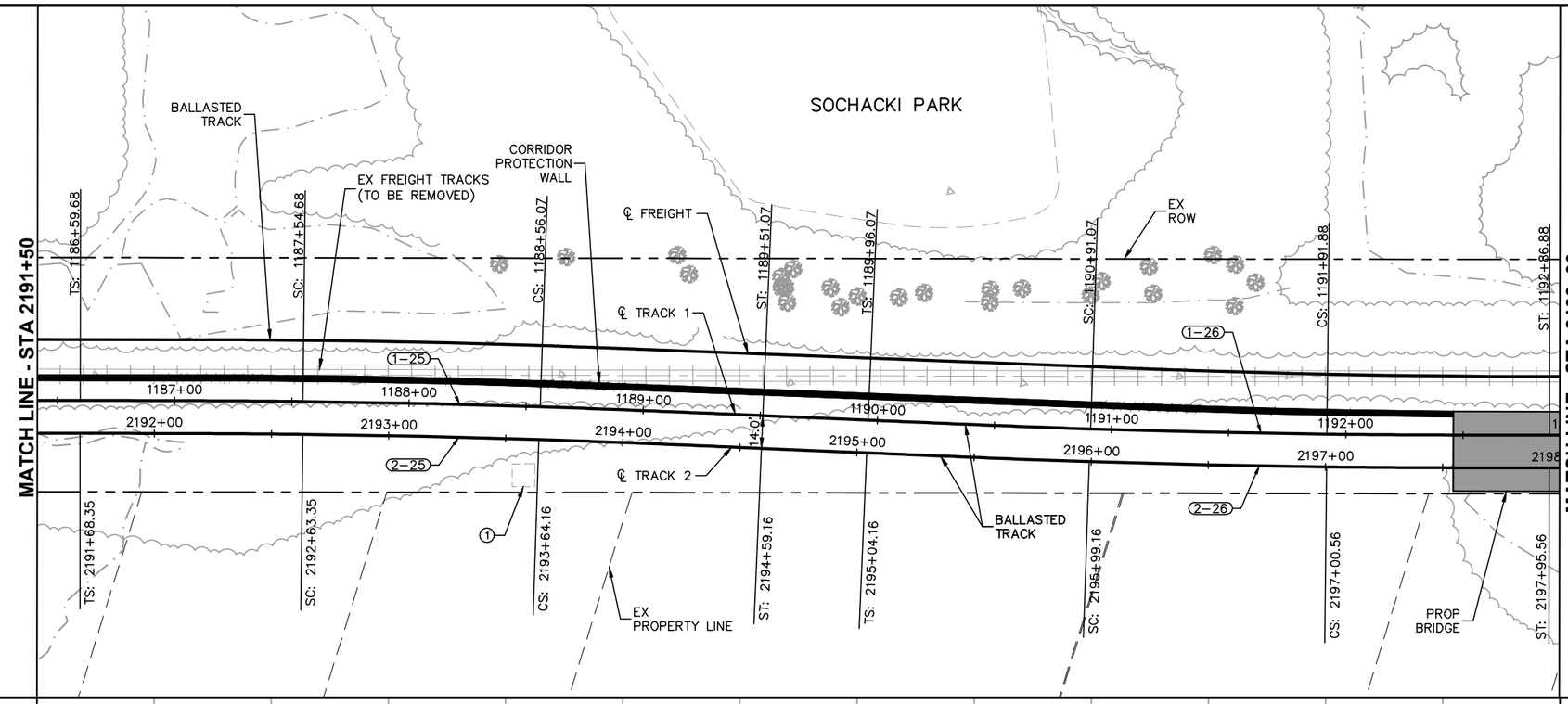
SHEET NAME: R-TRK-PPFL-001

SHEET 58 OF 93

Dec. 03 2015 02:57 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

CURVE NO 1–25
R = 4714.00'
Lc = 101.39'
Ls = 95.00'
Ea = 1.00"
Eu = 1.54"
Vd = 55 MPH

CURVE NO 2–25
R = 4700.00'
Lc = 100.81'
Ls = 95.00'
Ea = 1.00"
Eu = 1.55"
Vd = 55 MPH

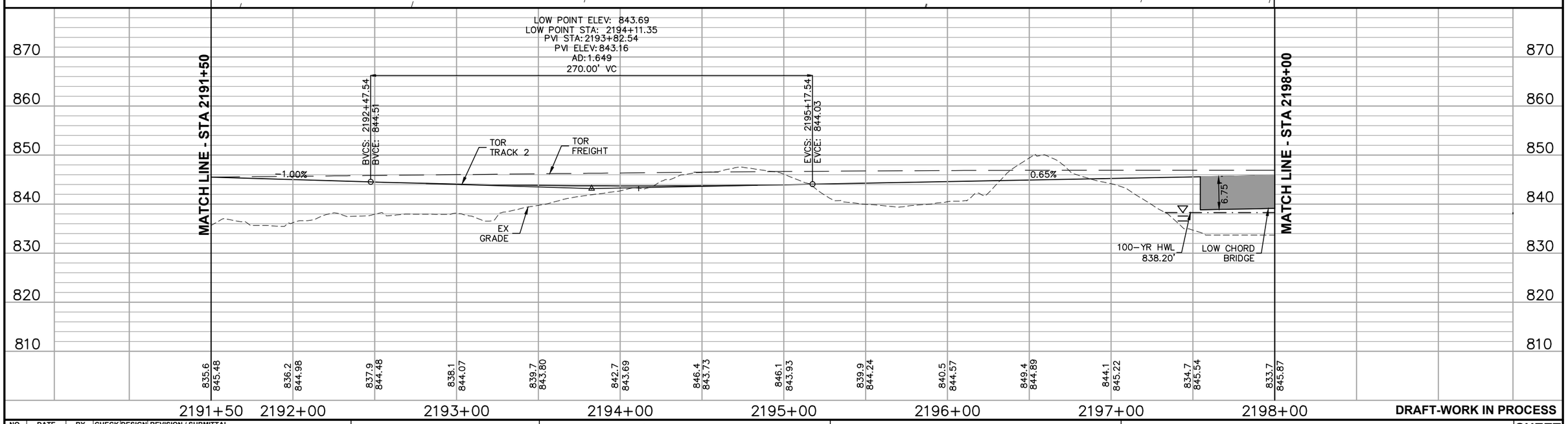


① NOTES:
XCEL TRANSMISSION TOWERS TO BE SHIFTED TO WEST SIDE OF BNSF ROW. SEE TRACK TYPICAL SECTIONS.

CURVE NO 1–26
R = 4700.00'
Lc = 100.81'
Ls = 95.00'
Ea = 1.00"
Eu = 1.55"
Vd = 55 MPH

CURVE NO 2–26
R = 4714.00'
Lc = 101.40'
Ls = 95.00'
Ea = 1.00"
Eu = 1.54"
Vd = 55 MPH

0 5 10 20
VERTICAL
0 15 30 60
HORIZONTAL
SCALE IN FEET



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

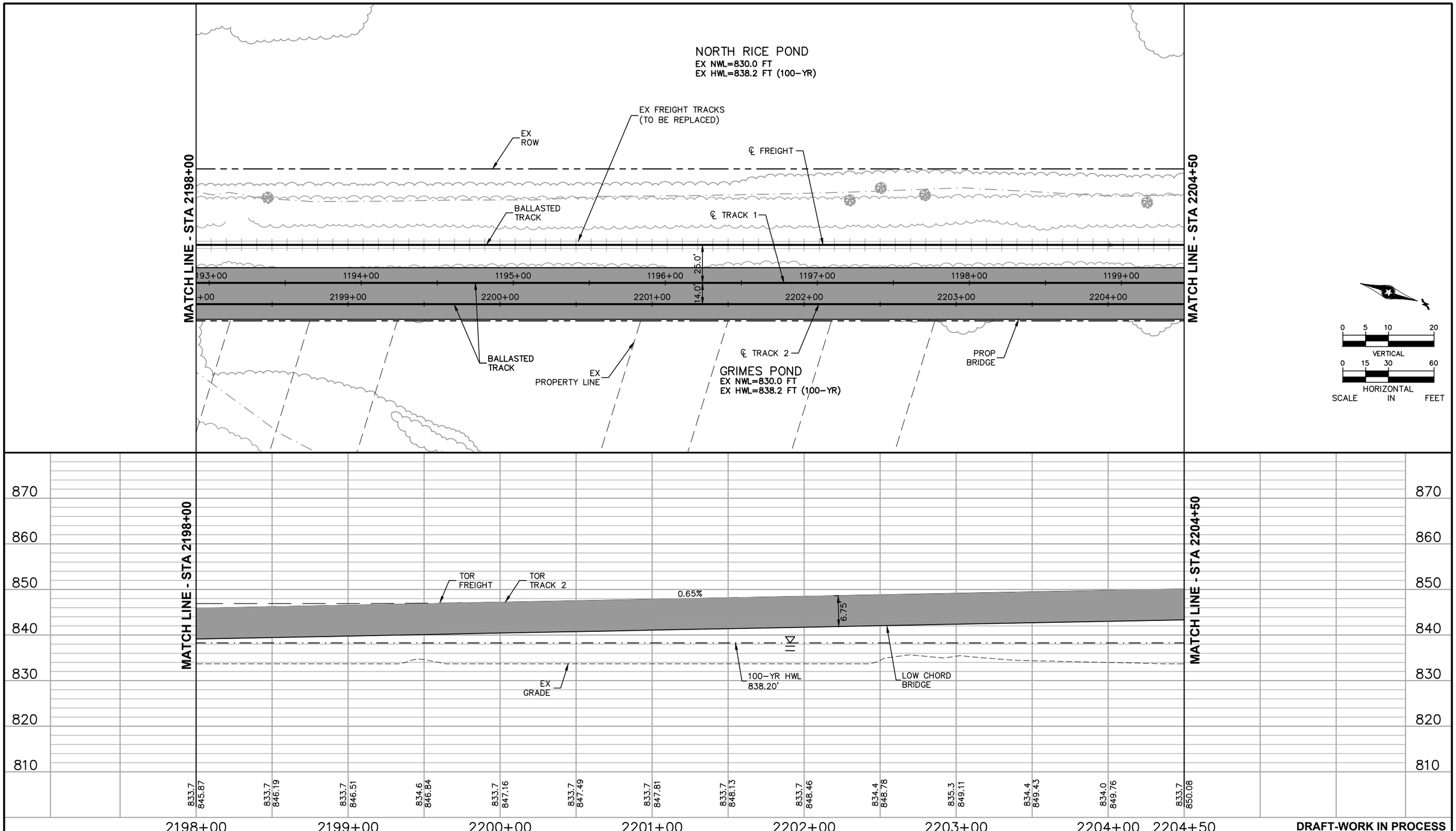
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2191+50 TO STA 2198+00

DISCIPLINE: TRACK
SHEET NAME: R-TRK-PPFL-002

SHEET 59 OF 93

Dec, 03 2015 02:59 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

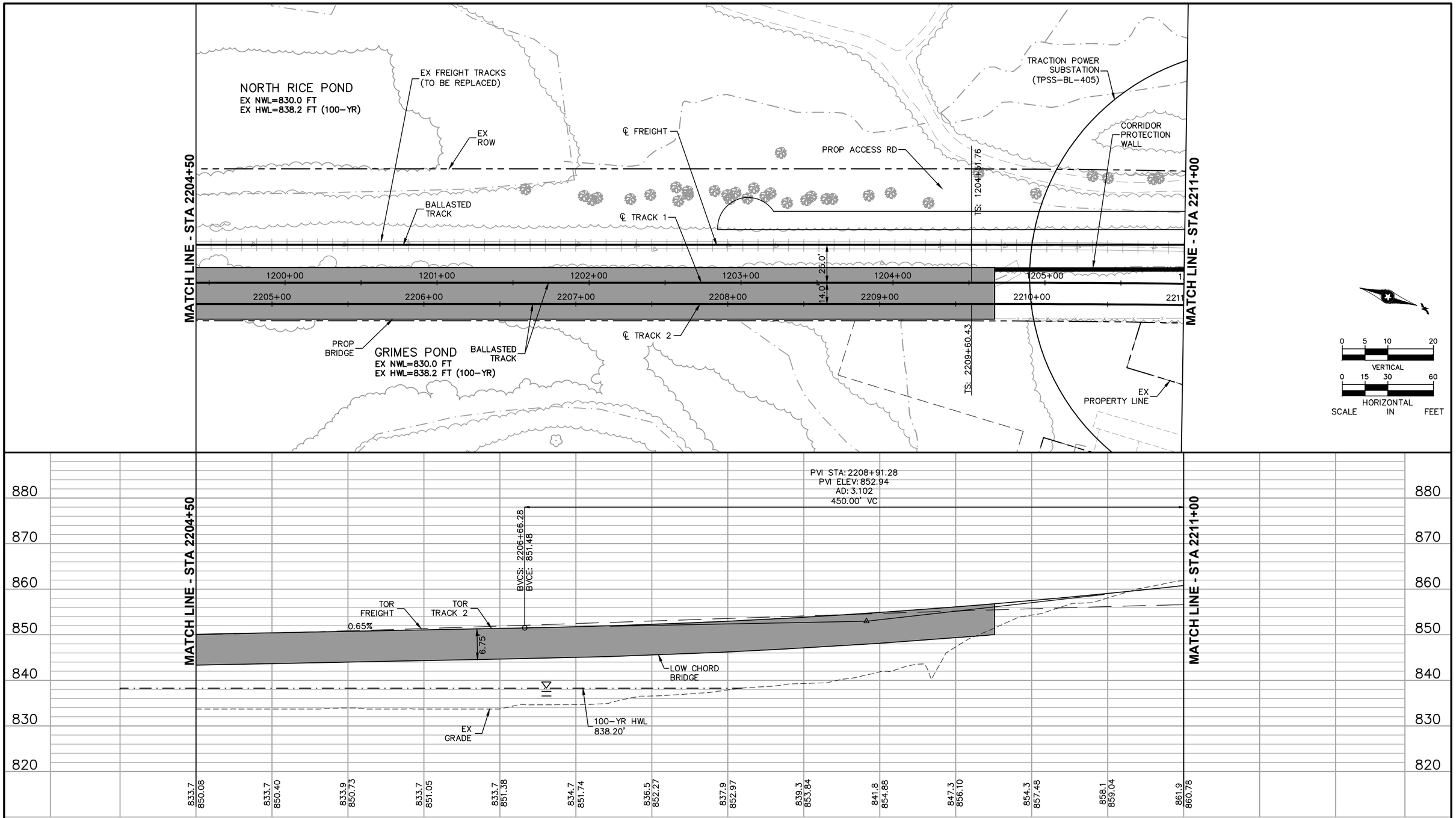
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2198+00 TO STA 2204+50

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-003

SHEET 60 OF 93

Dec, 03 2015 03:00 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

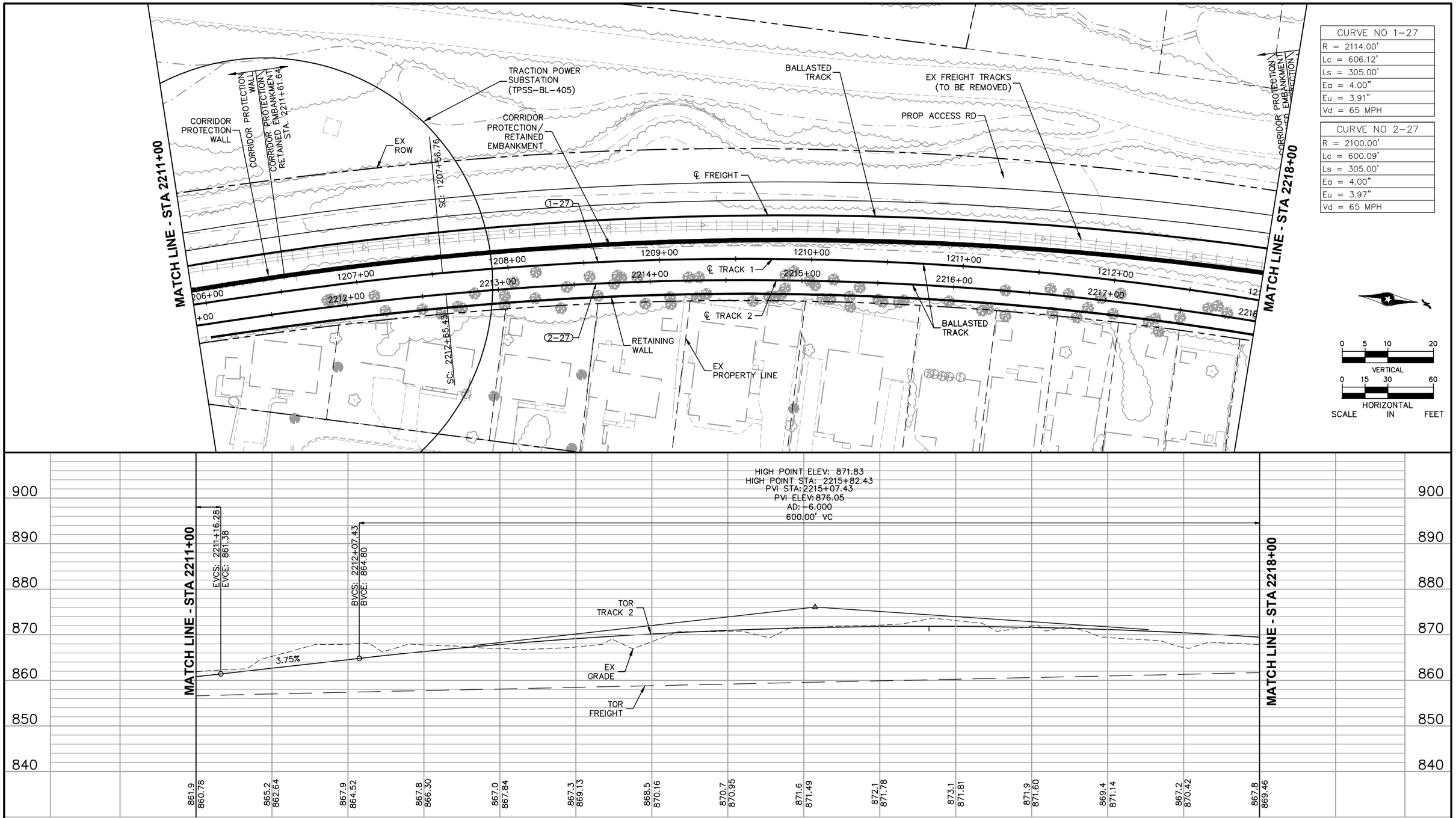
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2204+50 TO STA 2211+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-004

SHEET 61 OF 93

Dec, 03 2015 03:01 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



CURVE NO 1-27
R = 2114.00'
Lc = 606.12'
Ls = 305.00'
Ea = 4.00"
Eu = 3.91"
Vd = 65 MPH

CURVE NO 2-27
R = 2100.00'
Lc = 600.09'
Ls = 305.00'
Ea = 4.00"
Eu = 3.97"
Vd = 65 MPH

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

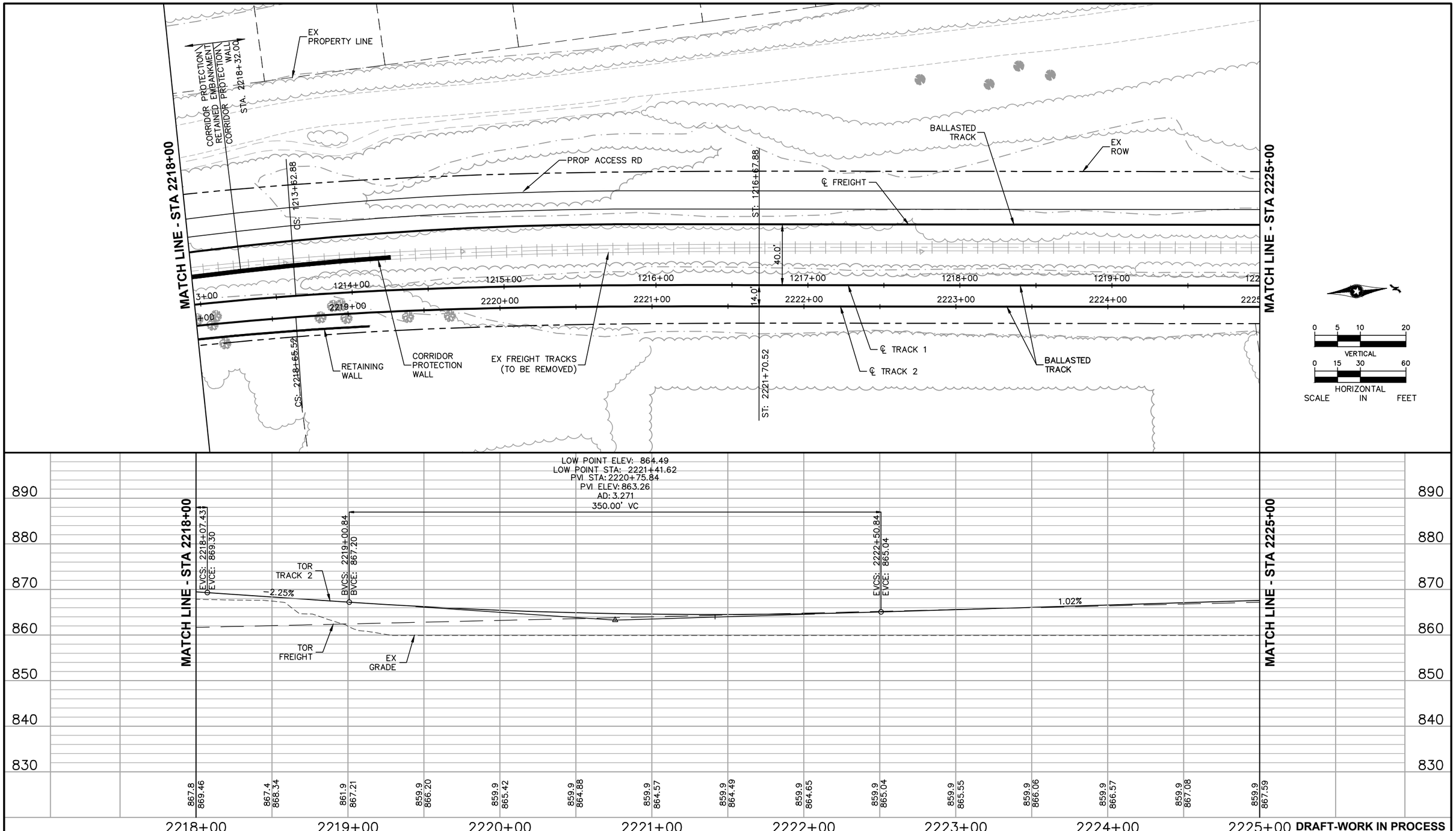
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2211+00 TO STA 2218+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-005

SHEET 62 OF 93

Dec. 03 2015 03:03 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

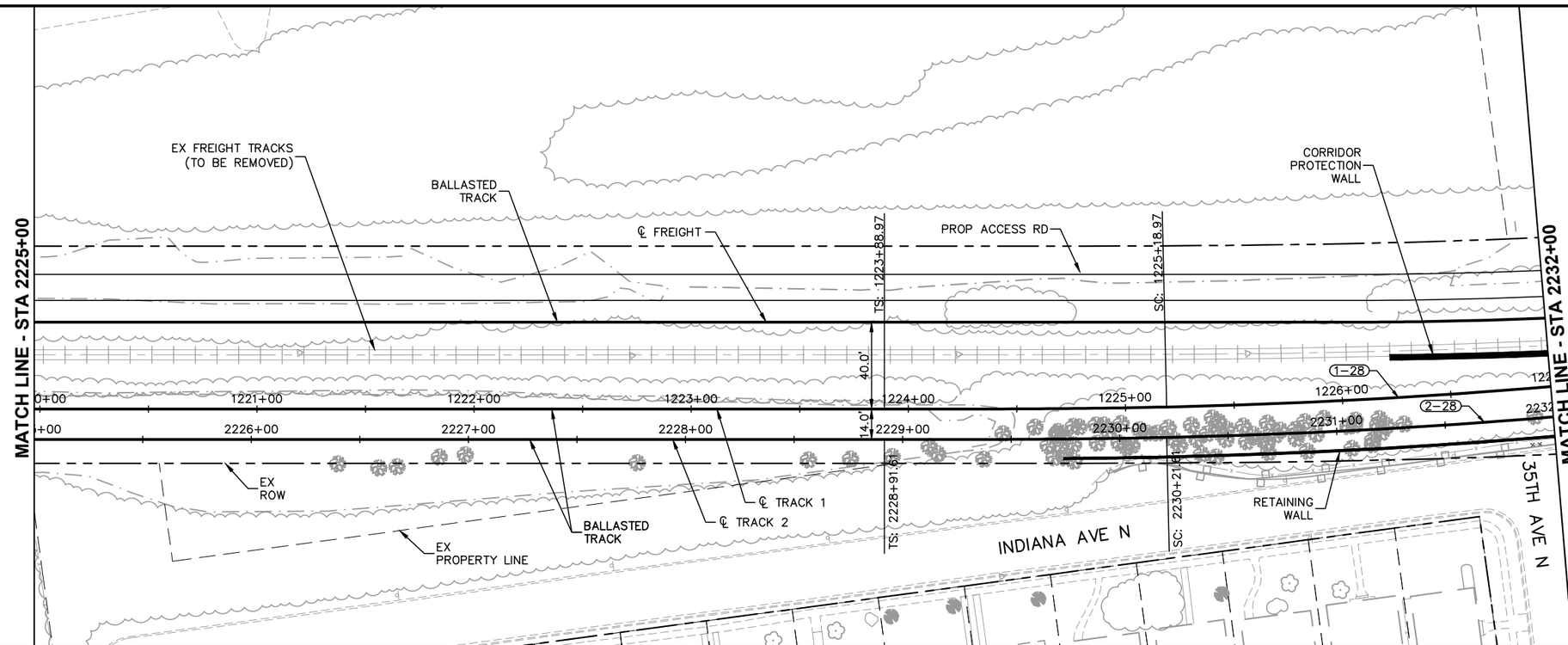
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2218+00 TO STA 2225+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-006

SHEET 63 OF 93

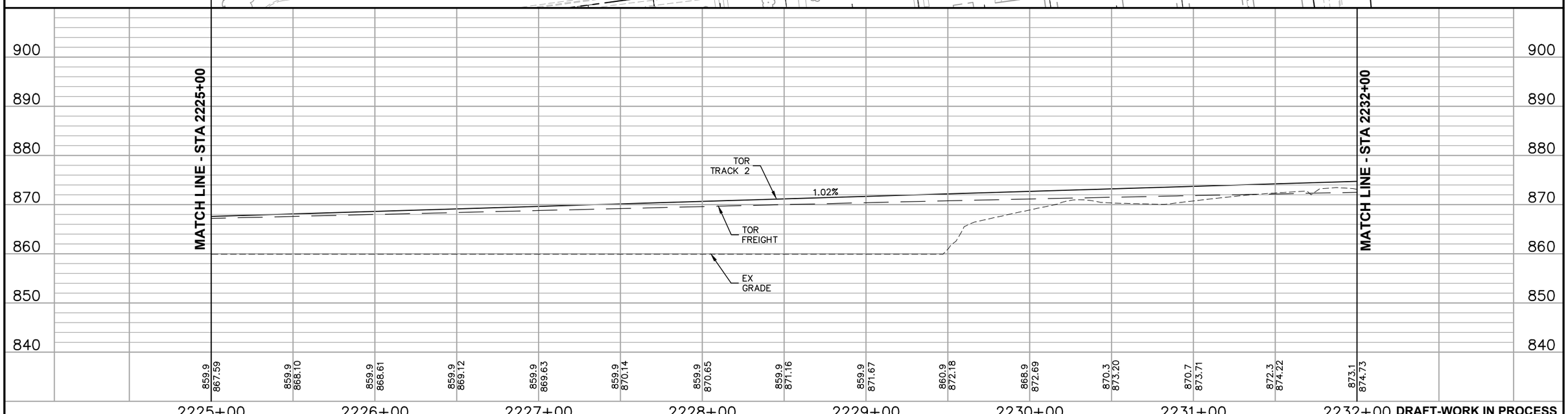
Dec, 03 2015 03:04 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



CURVE NO 1–28
R = 2900.00'
Lc = 467.50'
Ls = 130.00', 85.00'
Ea = 2.00"
Eu = 2.13"
Vd = 55 MPH

CURVE NO 2–28
R = 2914.00'
Lc = 470.30'
Ls = 130.00', 85.00'
Ea = 2.00"
Eu = 2.11"
Vd = 55 MPH

0 5 10 20
VERTICAL
0 15 30 60
HORIZONTAL
SCALE IN FEET



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2225+00 TO STA 2232+00

DISCIPLINE: TRACK
SHEET NAME: R-TRK-PPFL-007

SHEET 64 OF 93

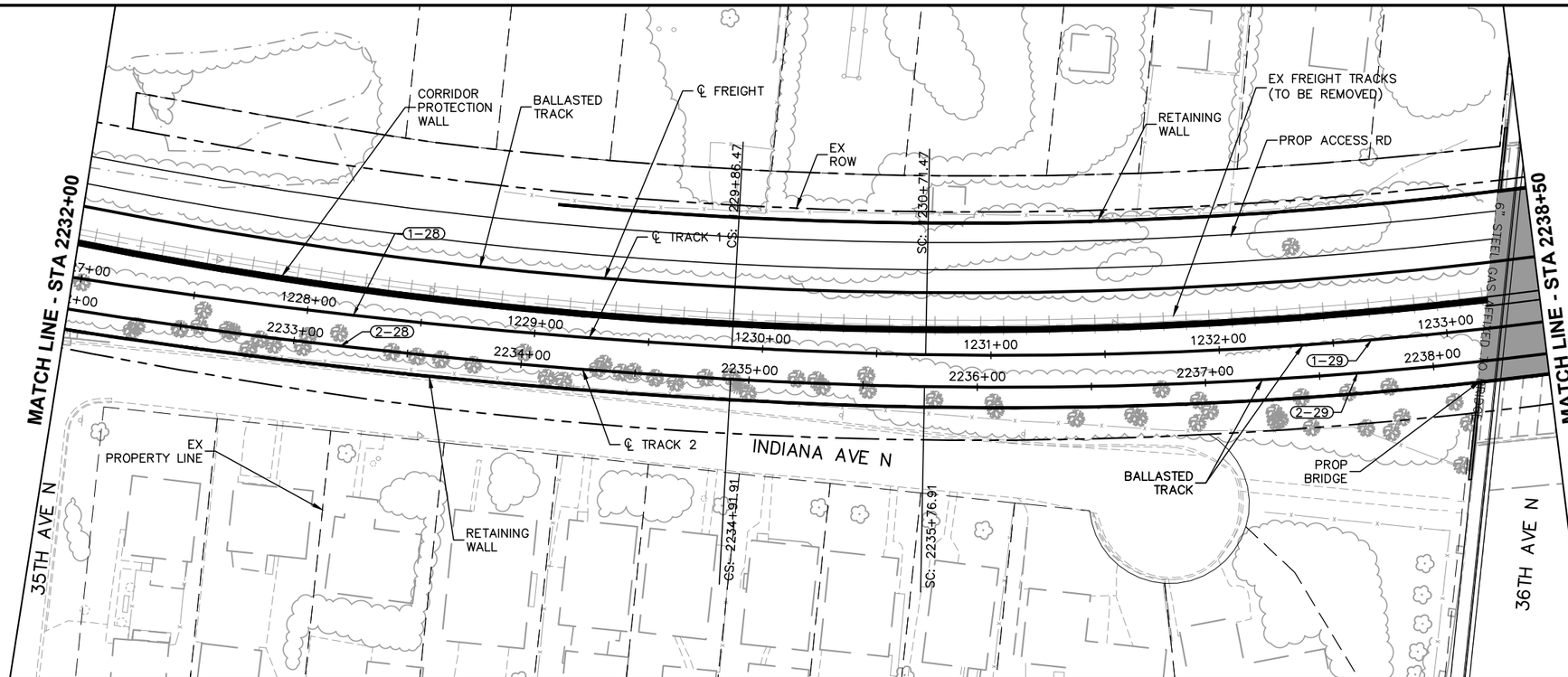
Dec, 03 2015 03:06 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

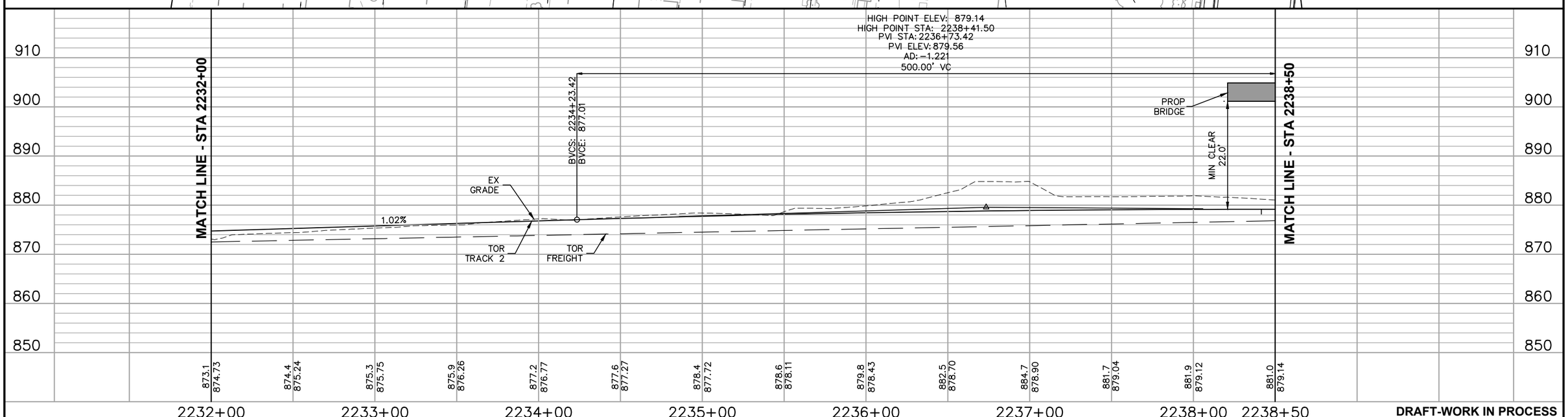
CURVE NO 1–28
R = 2900.00'
Lc = 467.50'
Ls = 130.00', 85.00'
Ea = 2.00"
Eu = 2.13"
Vd = 55 MPH

CURVE NO 2–28
R = 2914.00'
Lc = 470.30'
Ls = 130.00', 85.00'
Ea = 2.00"
Eu = 2.11"
Vd = 55 MPH

CURVE NO 1–29
R = 1900.00'
Lc = 774.12'
Ls = 85.00', 200.00'
Ea = 3.25"
Eu = 3.05"
Vd = 55 MPH

CURVE NO 2–29
R = 1914.00'
Lc = 780.85'
Ls = 85.00', 200.00'
Ea = 3.25"
Eu = 3.01"
Vd = 55 MPH





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2232+00 TO STA 2238+50

DISCIPLINE: TRACK

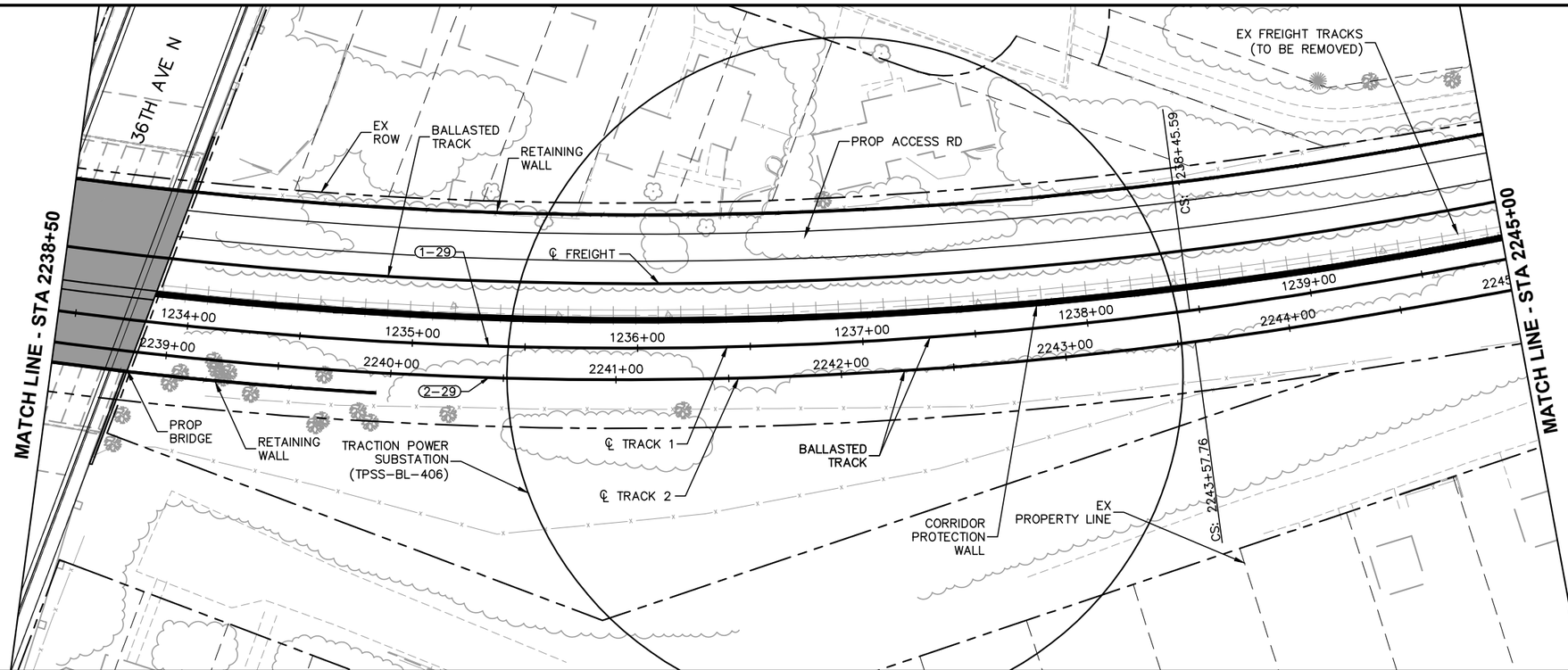
SHEET NAME: R-TRK-PPFL-008

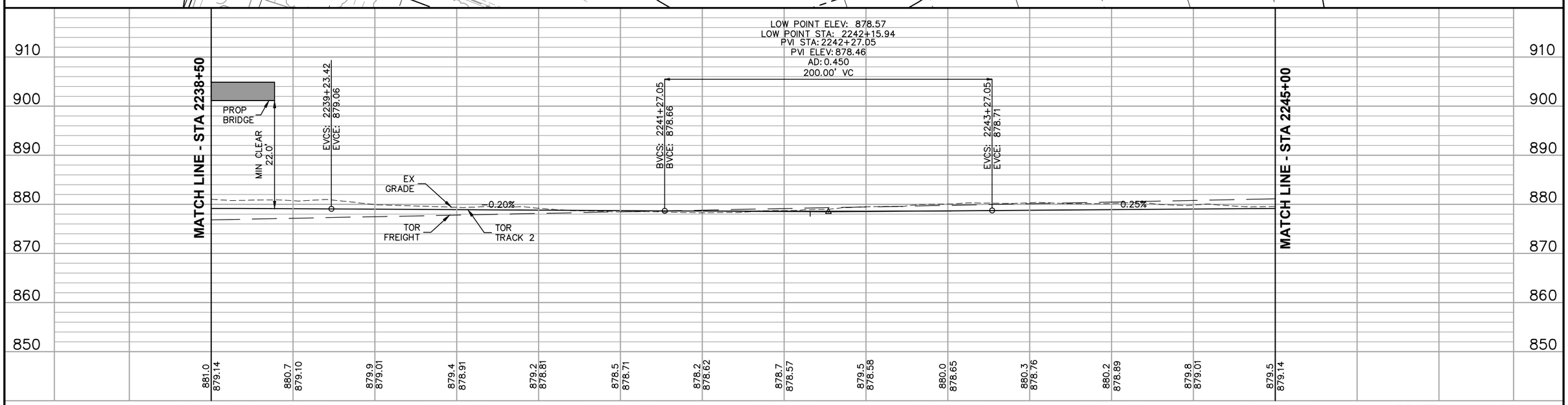
SHEET 65 OF 93

Dec, 03 2015 03:09 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

CURVE NO 1–29
R = 1900.00'
Lc = 774.12'
Ls = 85.00', 200.00'
Ea = 3.25"
Eu = 3.05"
Vd = 55 MPH

CURVE NO 2–29
R = 1914.00'
Lc = 780.85'
Ls = 85.00', 200.00'
Ea = 3.25"
Eu = 3.01"
Vd = 55 MPH





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

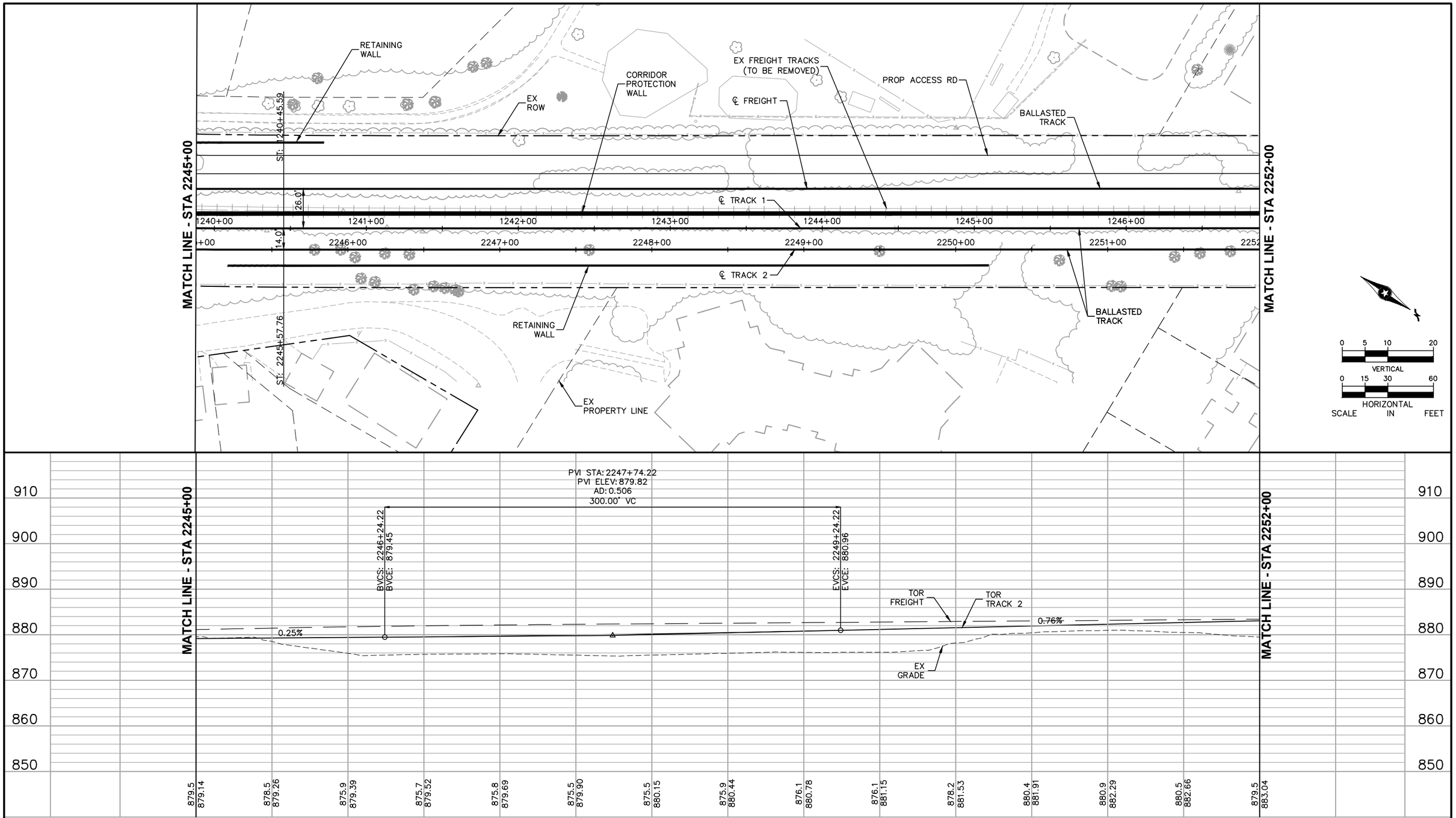
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2238+50 TO STA 2245+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-009

SHEET 66 OF 93

Dec, 03 2015 03:10 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

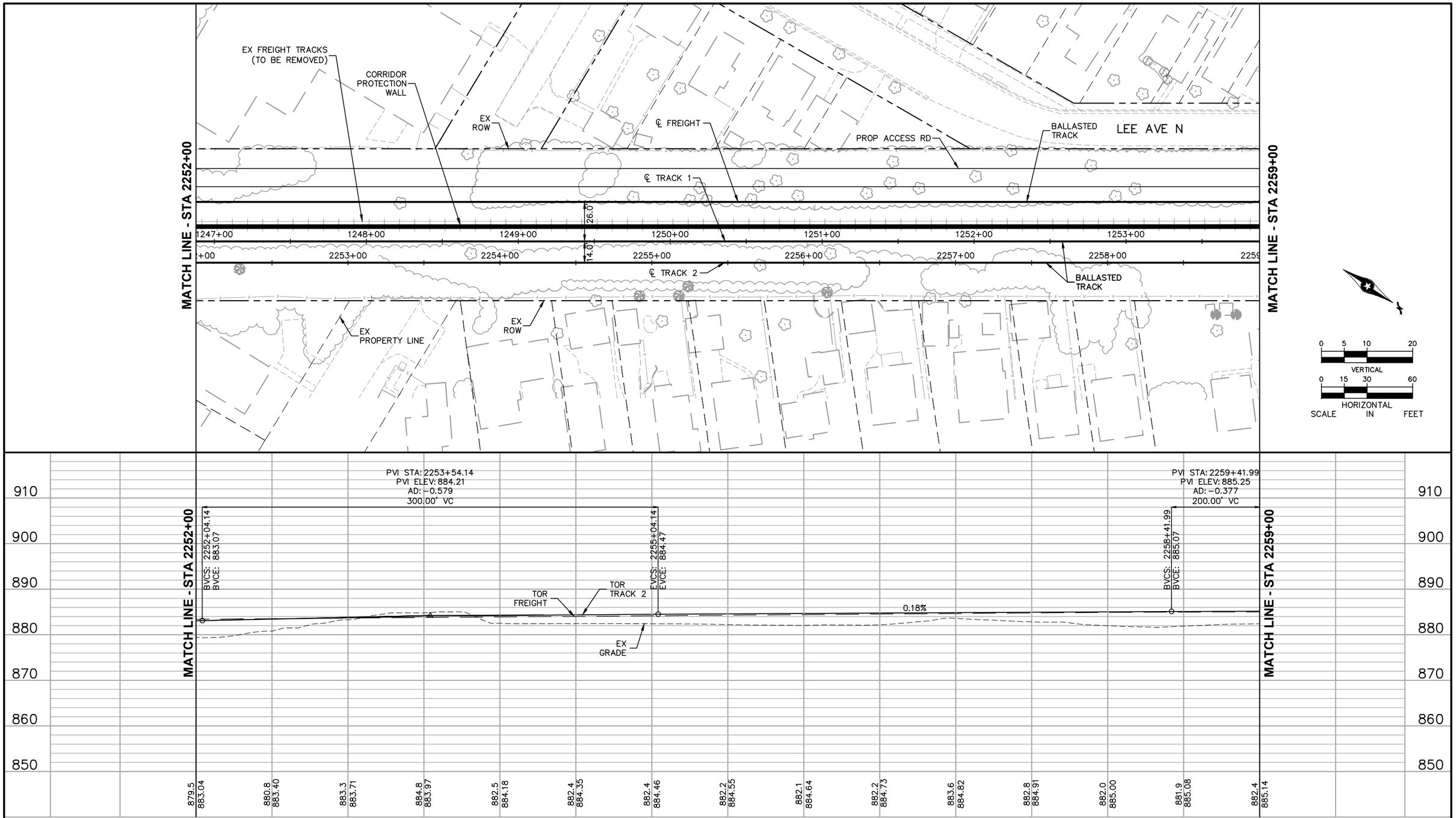
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2245+00 TO STA 2252+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-010

SHEET 67 OF 93

Dec, 03 2015 03:11 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

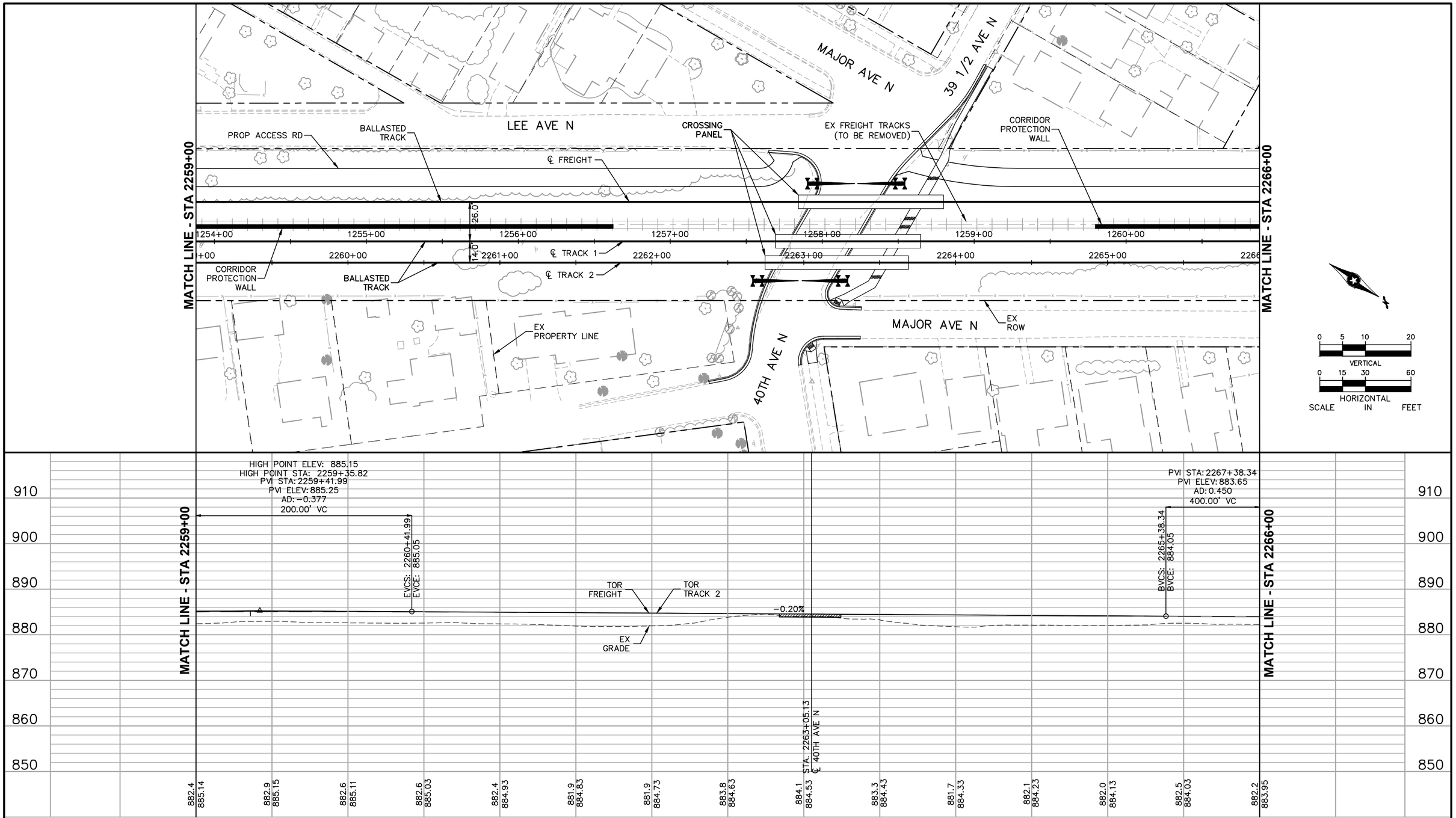
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2252+00 TO STA 2259+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-011

SHEET 68 OF 93

Dec, 03 2015 03:12 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

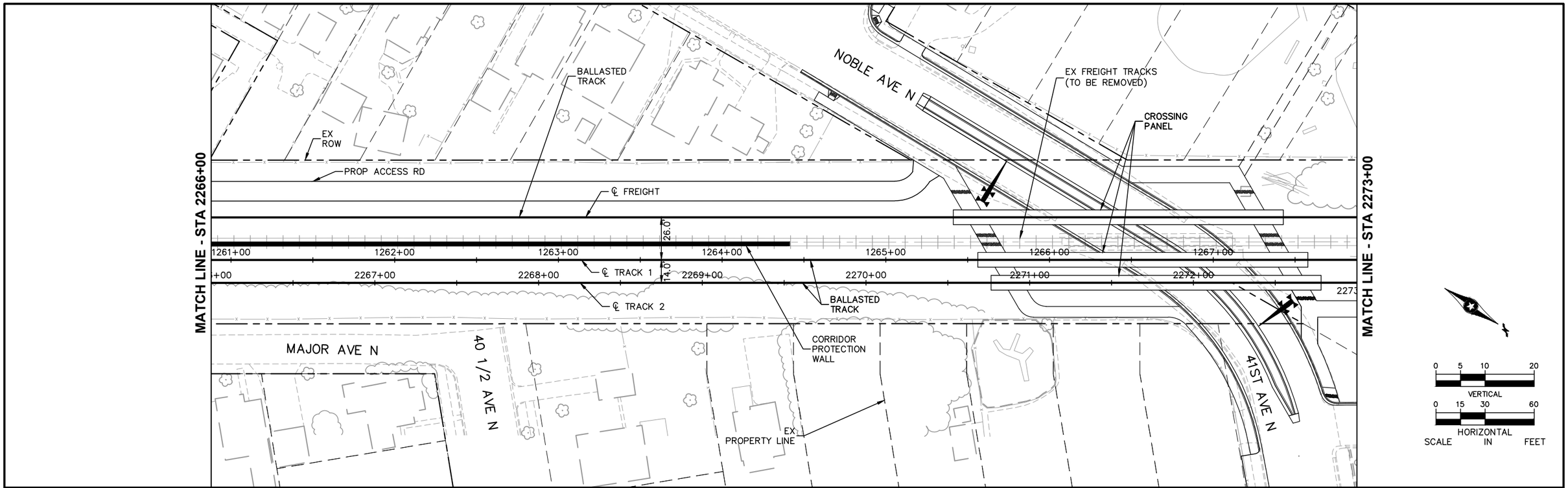
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2259+00 TO STA 2266+00

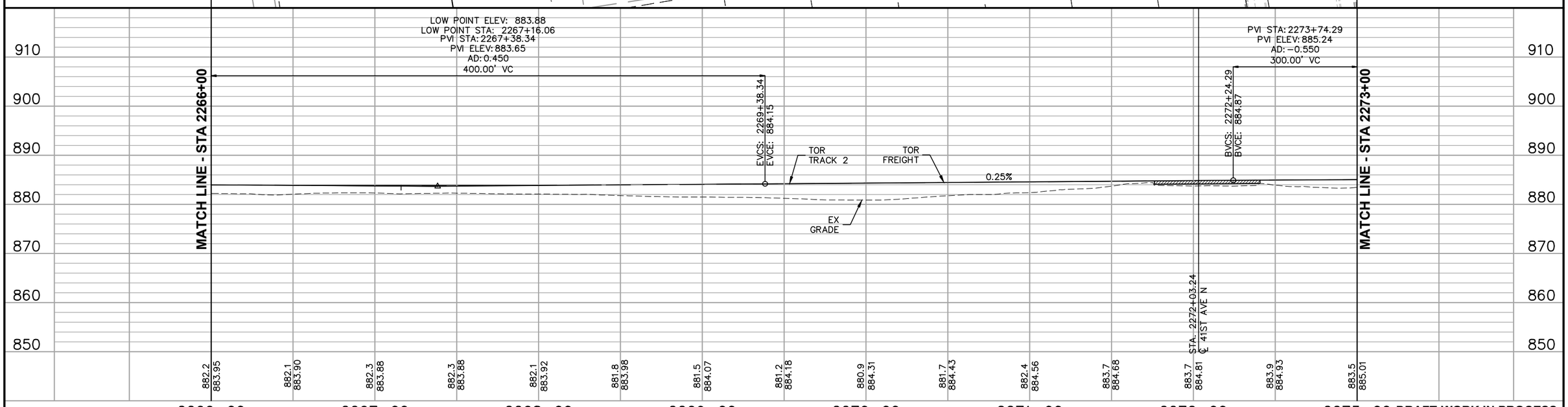
DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-012

SHEET 69 OF 93

Dec, 04 2015 10:22 am H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2266+00 TO STA 2273+00

DISCIPLINE: TRACK

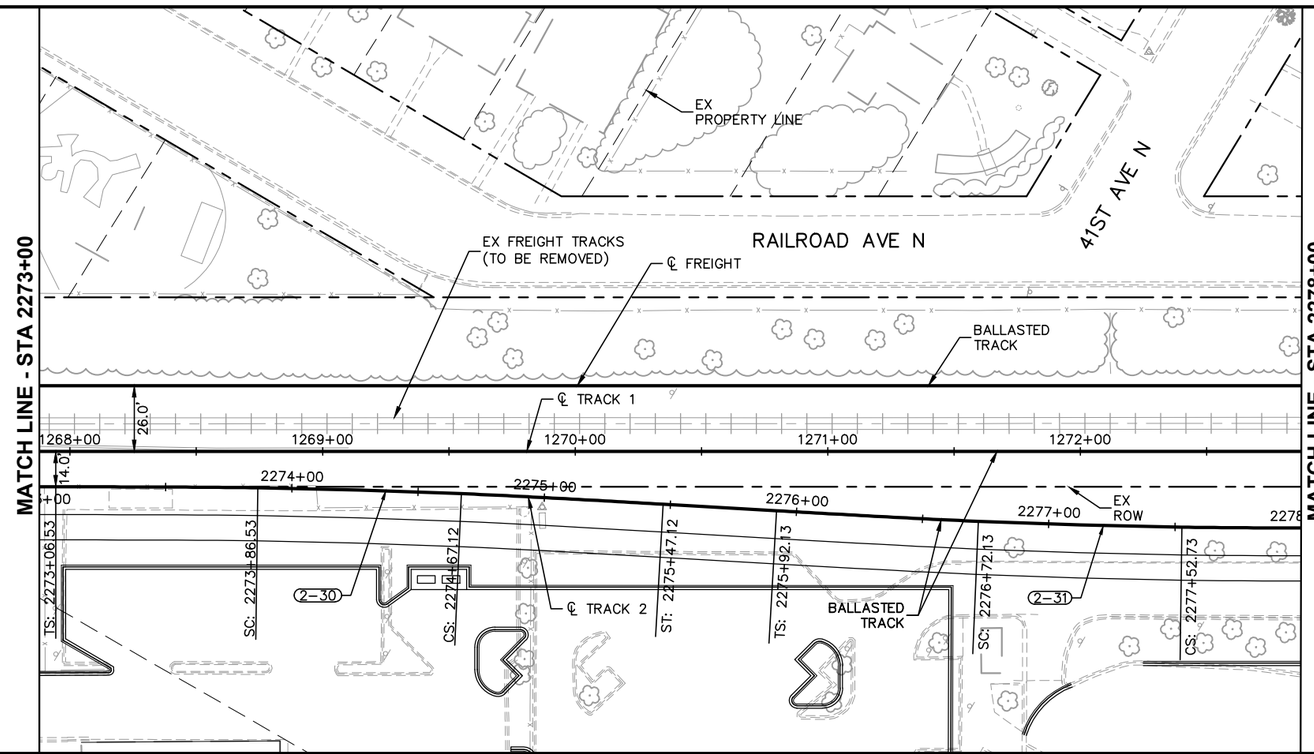
SHEET NAME: R-TRK-PPFL-013

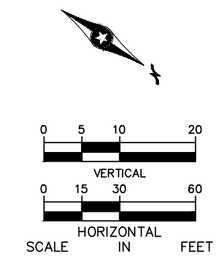
SHEET 70 OF 93

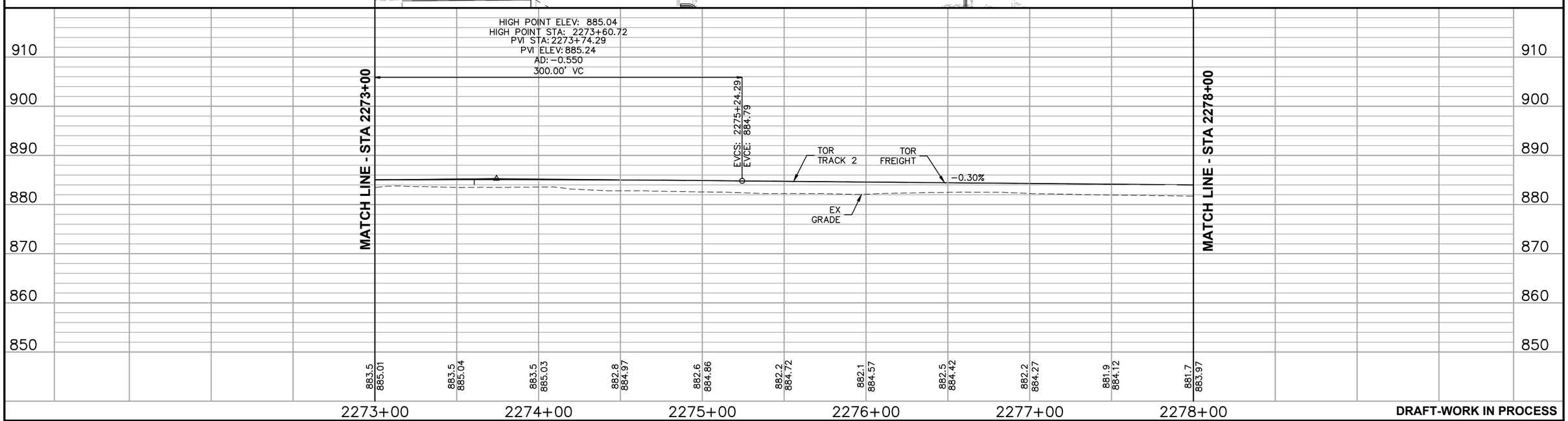
Dec, 04 2015 10:23 am H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

CURVE NO 2-30
R = 2800.00'
Lc = 80.59'
Ls = 80.00'
Ea = 1.25"
Eu = 1.61"
Vd = 45 MPH

CURVE NO 2-31
R = 2800.00'
Lc = 80.60'
Ls = 80.00'
Ea = 1.25"
Eu = 1.61"
Vd = 45 MPH







DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

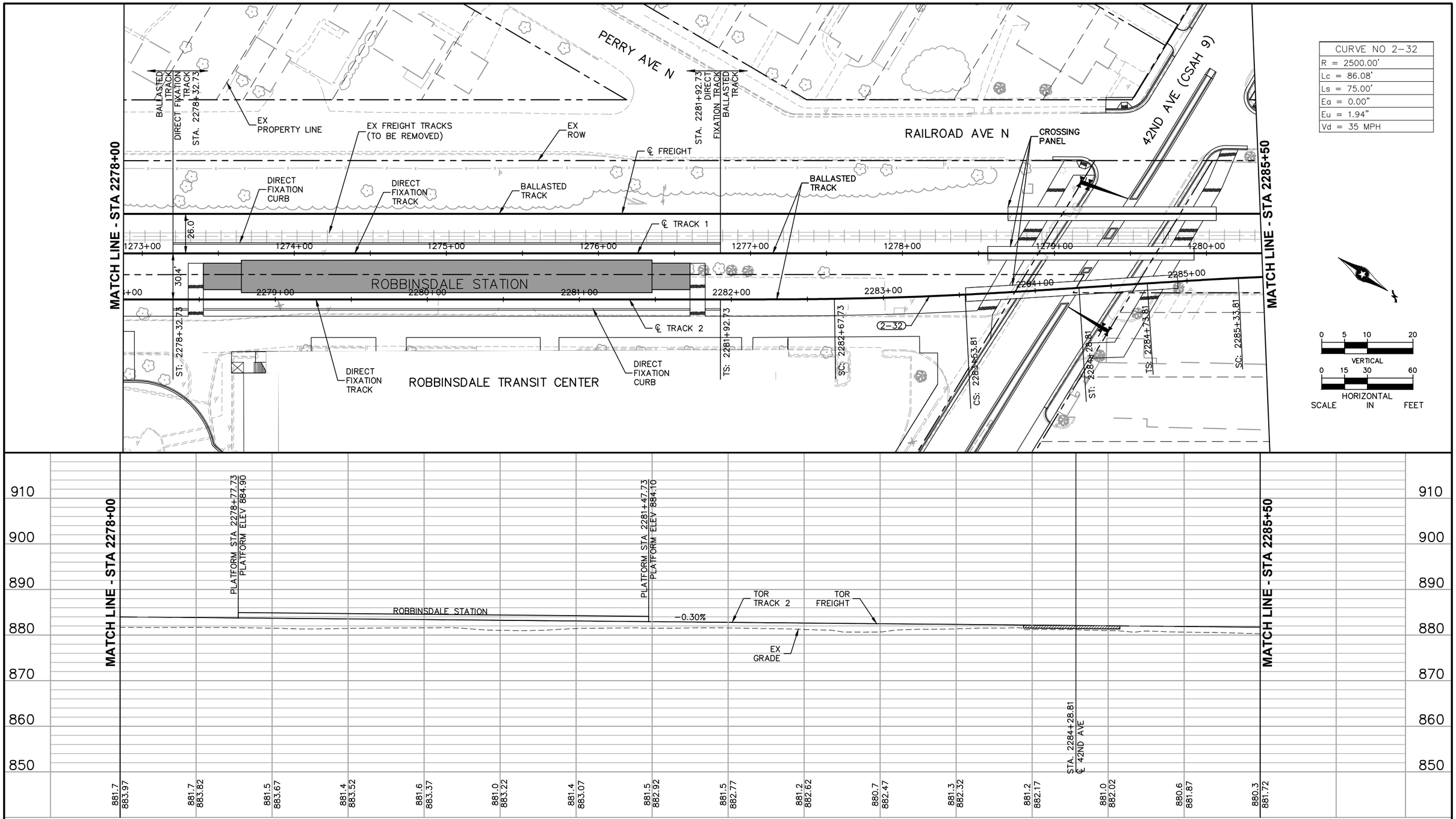
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2273+00 TO STA 2278+00

DISCIPLINE: TRACK
SHEET NAME: R-TRK-PPFL-014

SHEET 71 OF 93

Dec, 04 2015 10:25 am H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2278+00 TO STA 2285+50

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-015

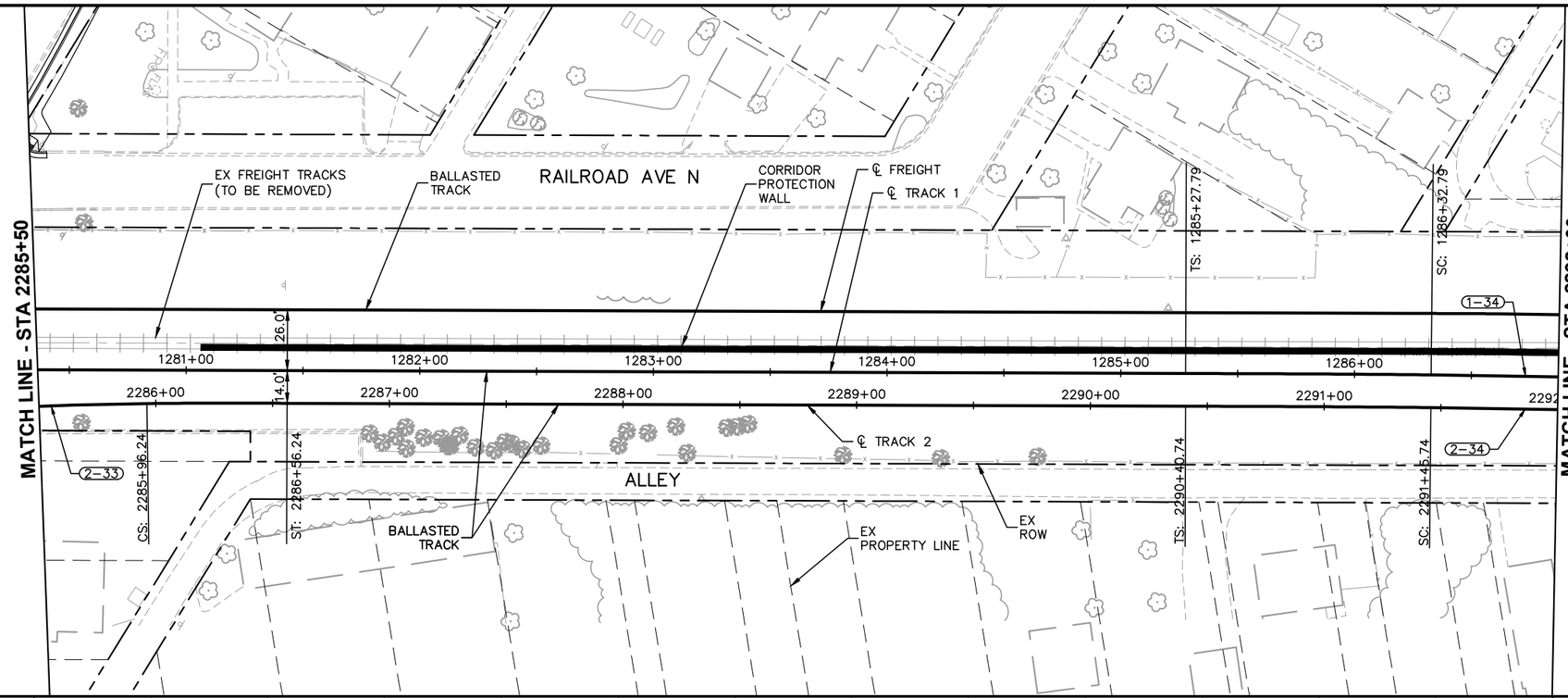
SHEET 72 OF 93

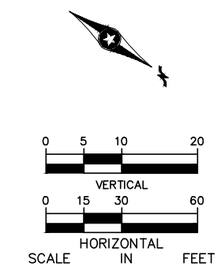
Dec, 03 2015 03:18 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

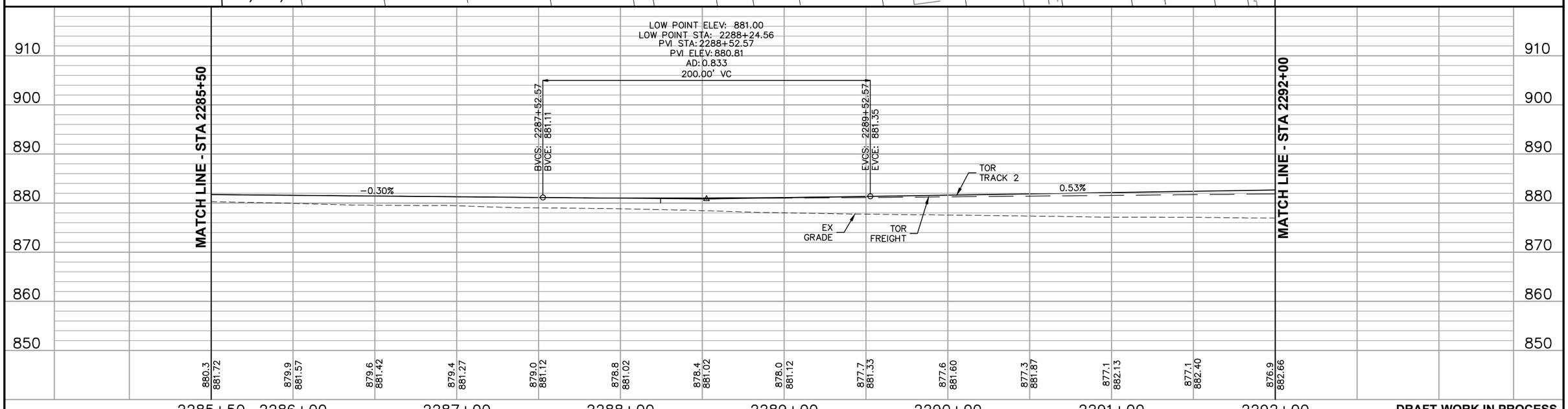
CURVE NO 2-33
R = 1900.00'
Lc = 62.43'
Ls = 60.00'
Ea = 1.00"
Eu = 1.55"
Vd = 35 MPH

CURVE NO 1-34
R = 6814.00'
Lc = 113.03'
Ls = 105.00'
Ea = 1.00"
Eu = 1.46"
Vd = 65 MPH

CURVE NO 2-34
R = 6800.00'
Lc = 112.59'
Ls = 105.00'
Ea = 1.00"
Eu = 1.46"
Vd = 65 MPH







DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2285+50 TO STA 2292+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-016

SHEET 73 OF 93

Dec, 03 2015 03:20 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

CURVE NO 1–34
R = 6814.00'
Lc = 113.03'
Ls = 105.00'
Ea = 1.00"
Eu = 1.46"
Vd = 65 MPH

CURVE NO 2–34
R = 6800.00'
Lc = 112.59'
Ls = 105.00'
Ea = 1.00"
Eu = 1.46"
Vd = 65 MPH

CURVE NO 1–35
R = 6550.00'
Lc = 118.33'
Ls = 110.00'
Ea = 1.25"
Eu = 1.30"
Vd = 65 MPH

CURVE NO 2–35
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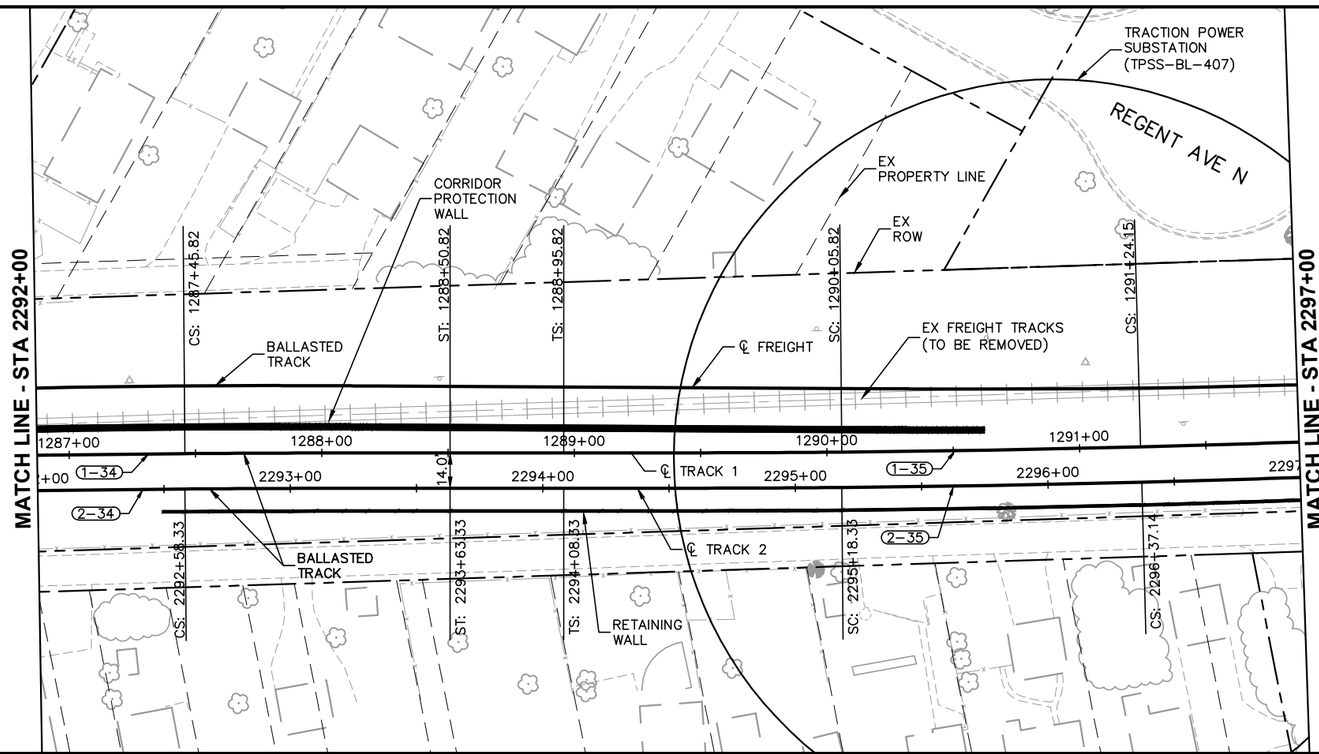
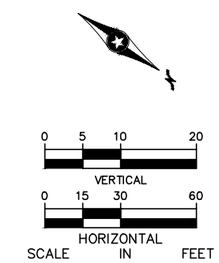
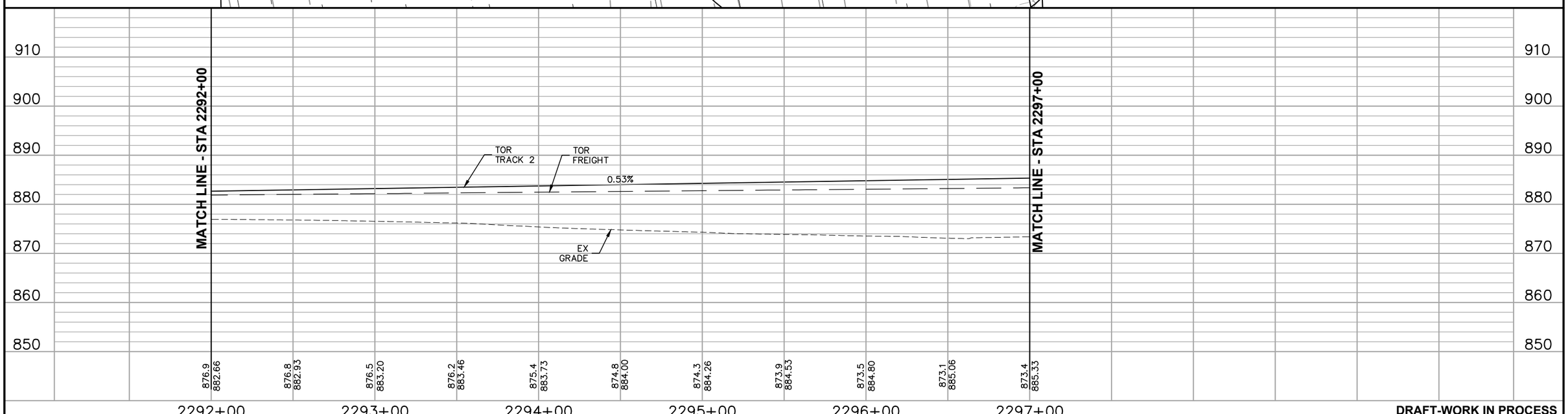
Lc = 118.81'
Ls = 110.00'
Ea = 1.25"
Eu = 1.30"
Vd = 65 MPH







DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

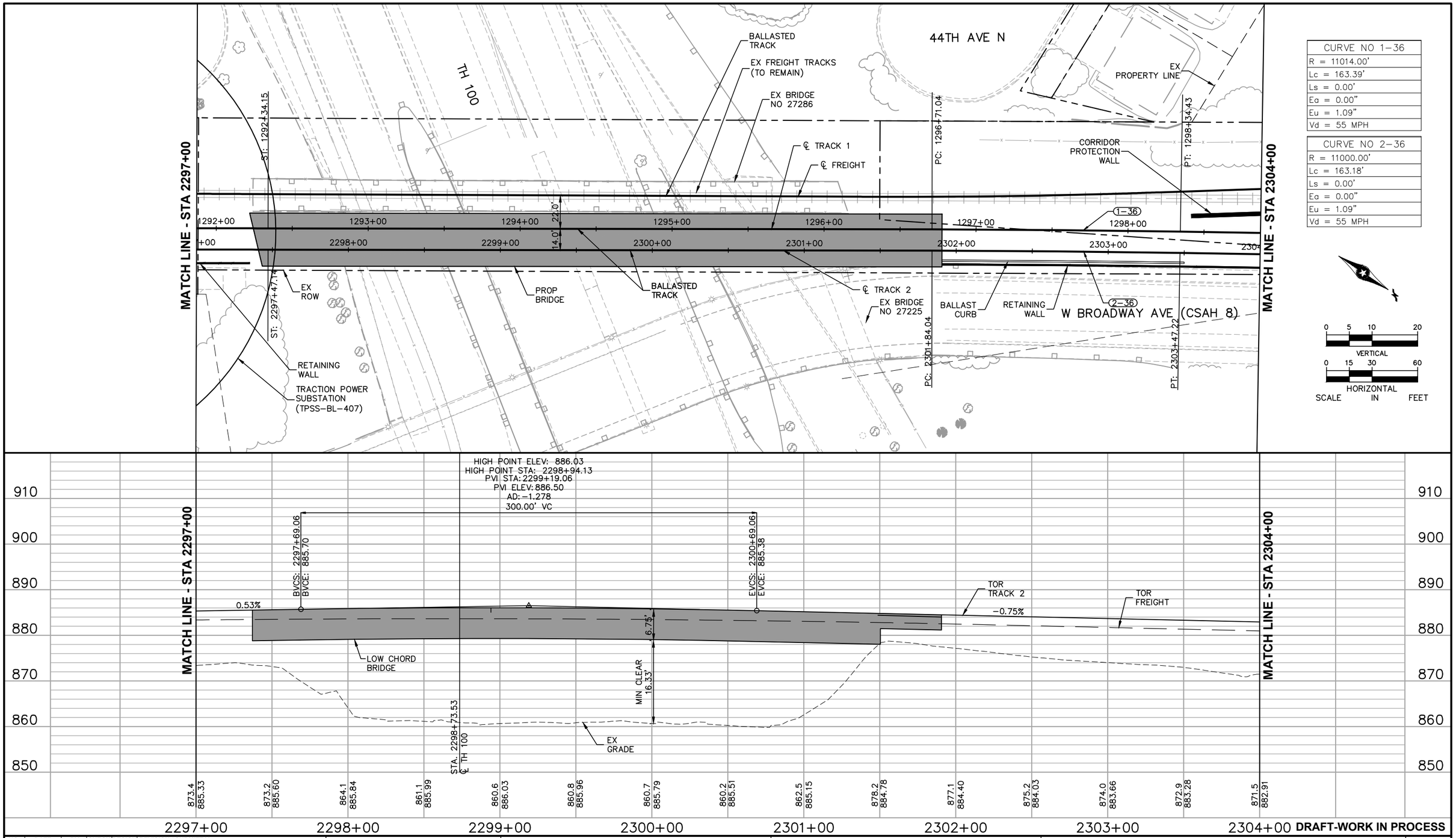
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2292+00 TO STA 2297+00

DISCIPLINE: TRACK
SHEET NAME: R-TRK-PPFL-017

SHEET 74 OF 93

Dec, 03 2015 03:22 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2297+00 TO STA 2304+00

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-018

SHEET 75 OF 93

Dec, 03 2015 03:24 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho

CURVE NO 1-37
R = 14000.00'
Lc = 167.64'
Ls = 0.00'
Ea = 0.00"
Eu = 0.86"
Vd = 55 MPH

CURVE NO 2-37
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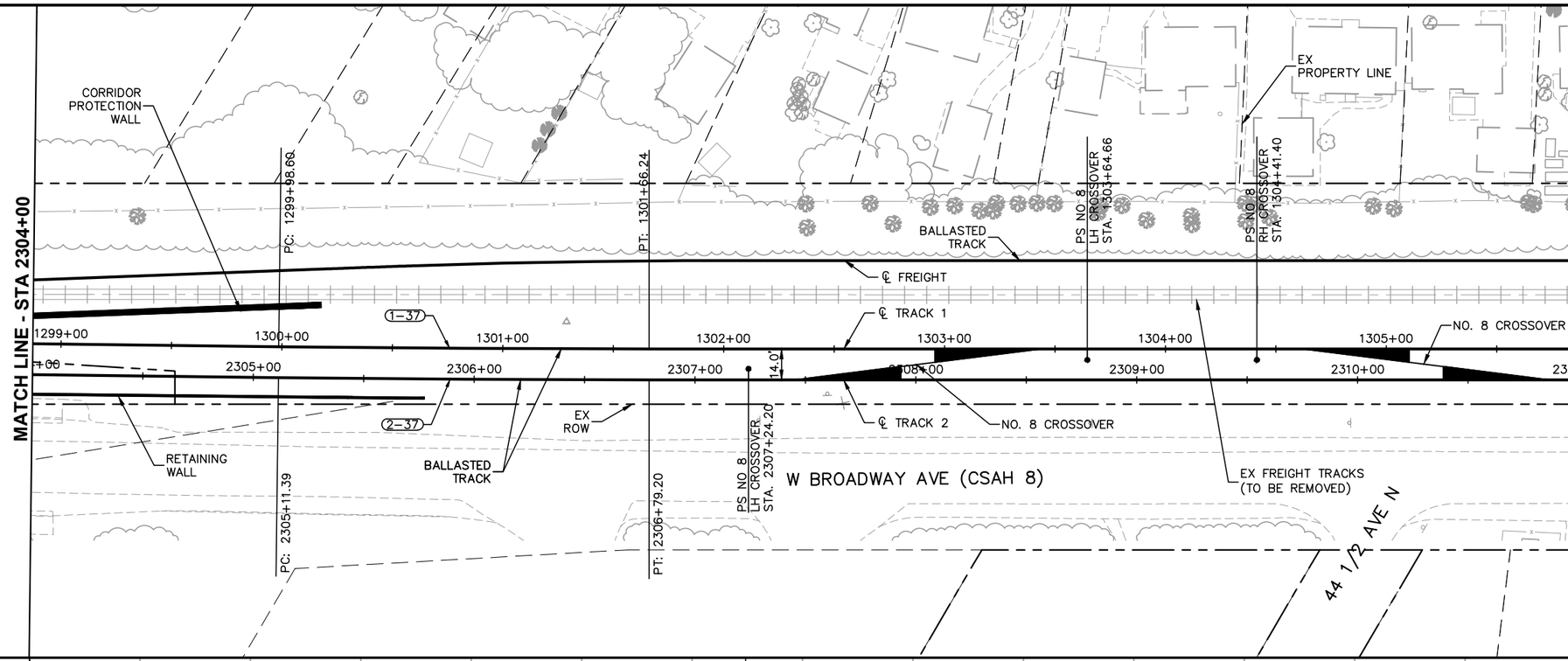
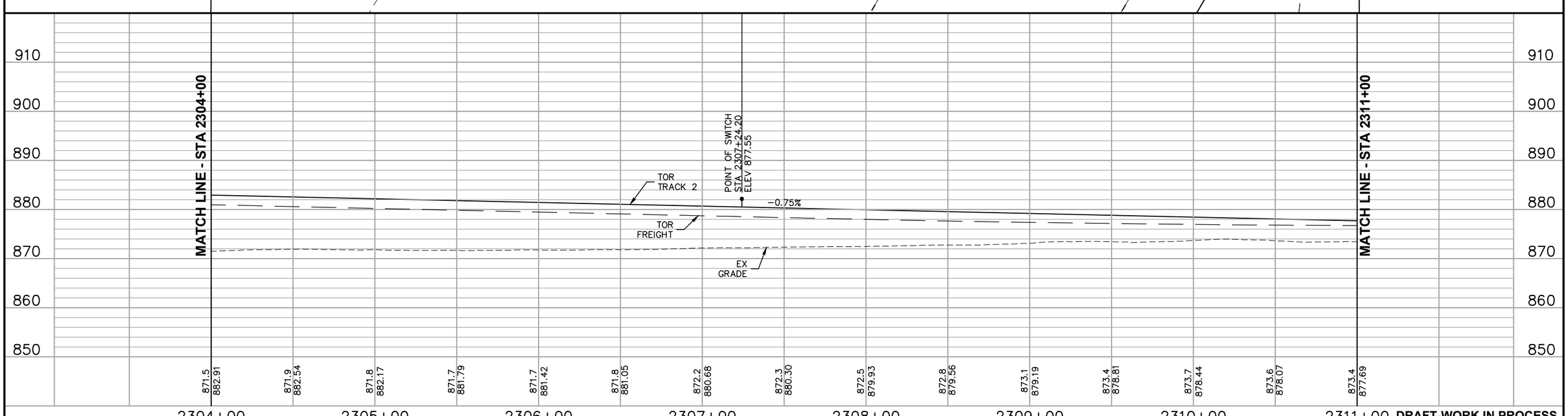
Lc = 167.81'
Ls = 0.00'
Ea = 0.00"
Eu = 0.85"
Vd = 55 MPH





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

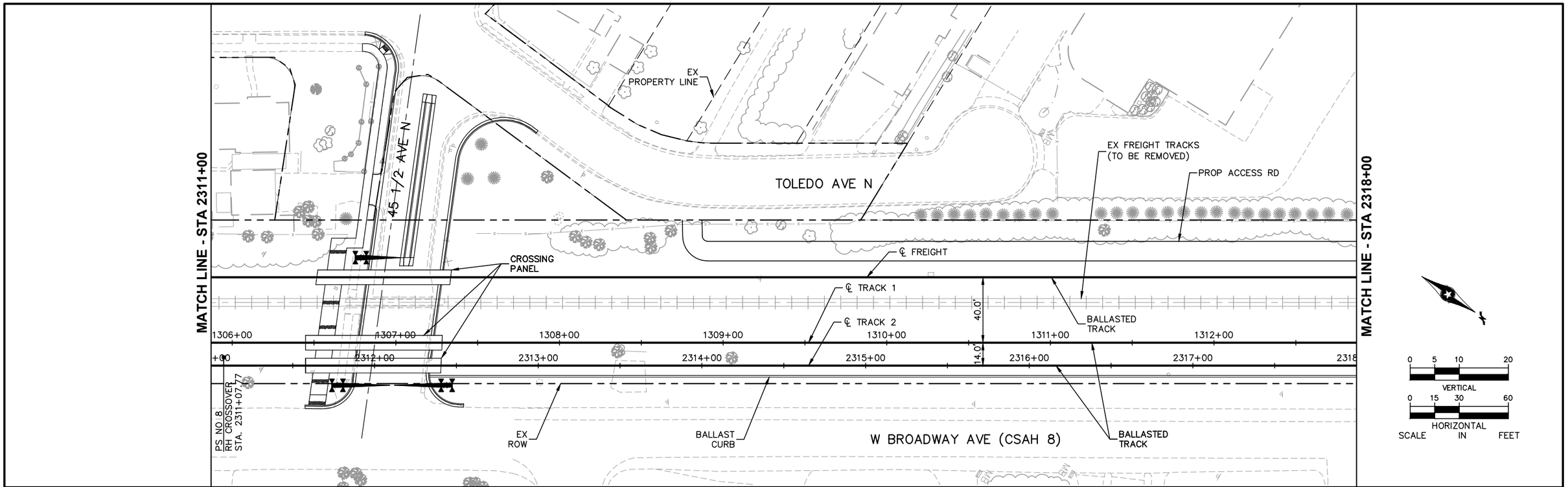
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2304+00 TO STA 2311+00

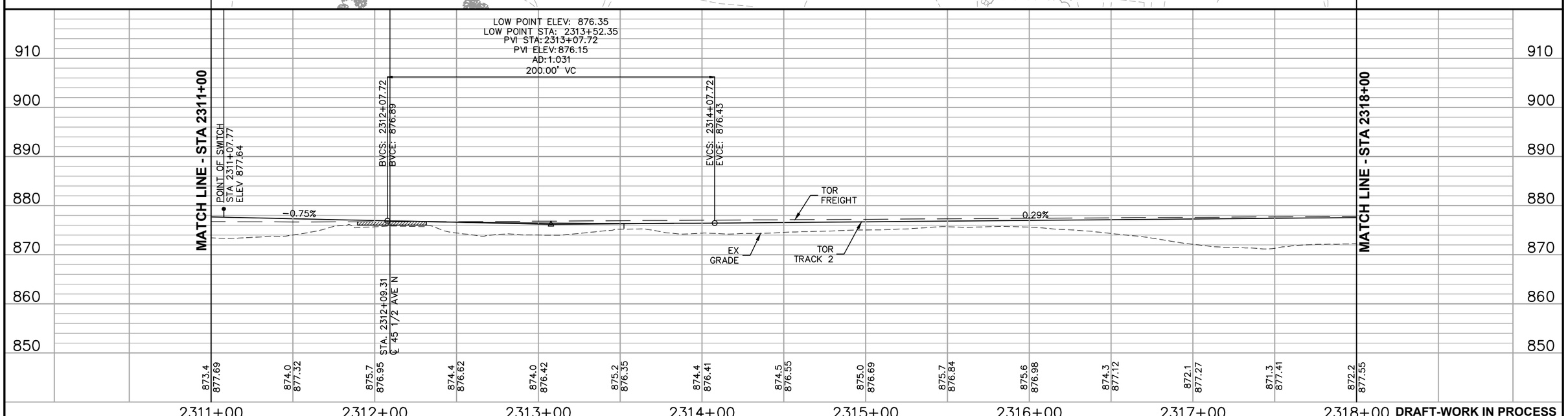
DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-019

SHEET 76 OF 93

Dec, 03 2015 03:26 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho





DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

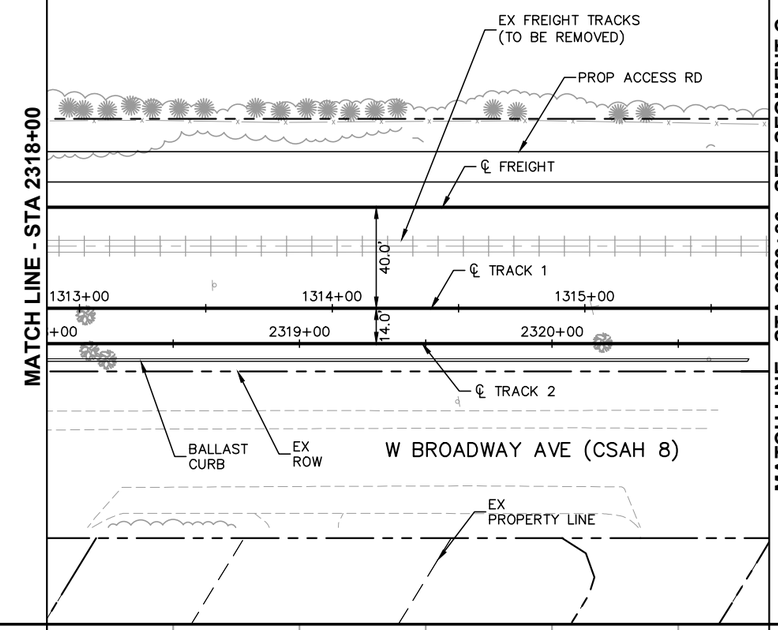
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2311+00 TO STA 2318+00

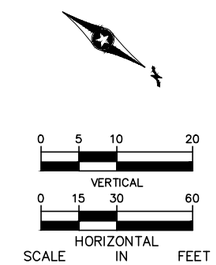
DISCIPLINE: TRACK

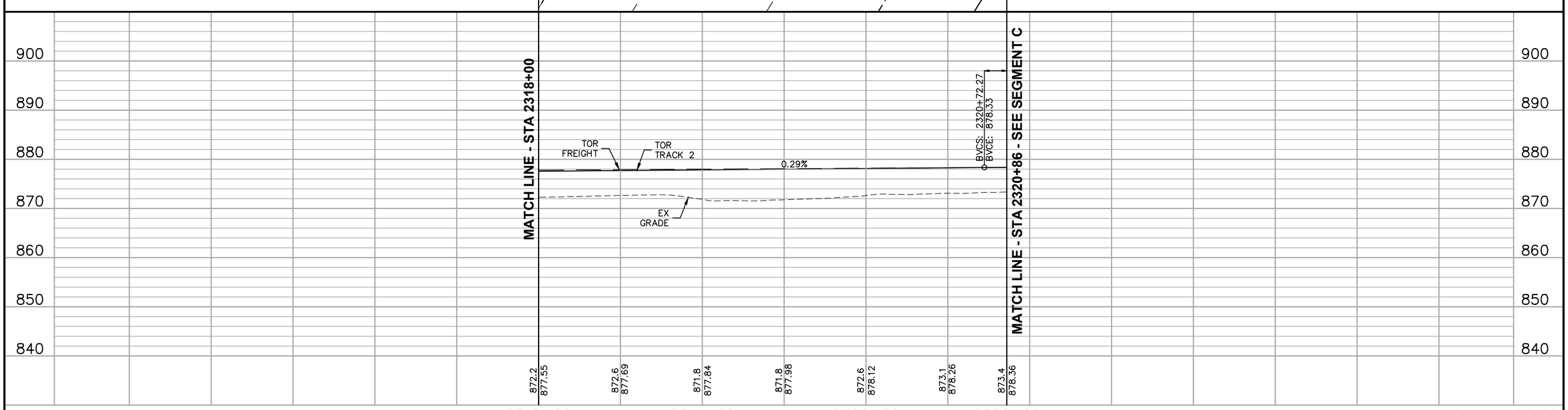
SHEET NAME: R-TRK-PPFL-020

SHEET 77 OF 93

Dec, 03 2015 03:27 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho







DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

WSP | PARSONS BRINCKERHOFF

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

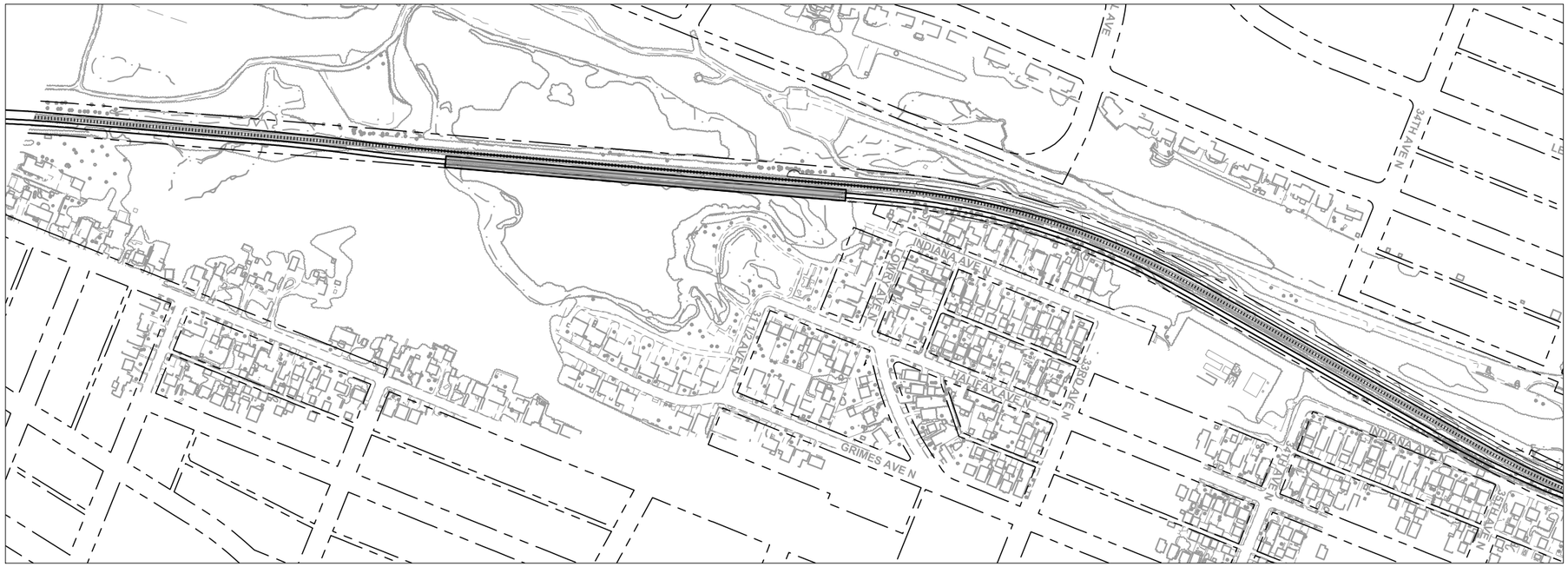
SEGMENT R
RAIL CORRIDOR
PLAN AND PROFILE
STA 2318+00 TO STA 2320+86

DISCIPLINE: TRACK

SHEET NAME: R-TRK-PPFL-021

SHEET 78 OF 93

Dec. 03 2015 03:28 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\TRACK\R-TRK-PPFL.dwg By: V-Prudho



SEE BELOW

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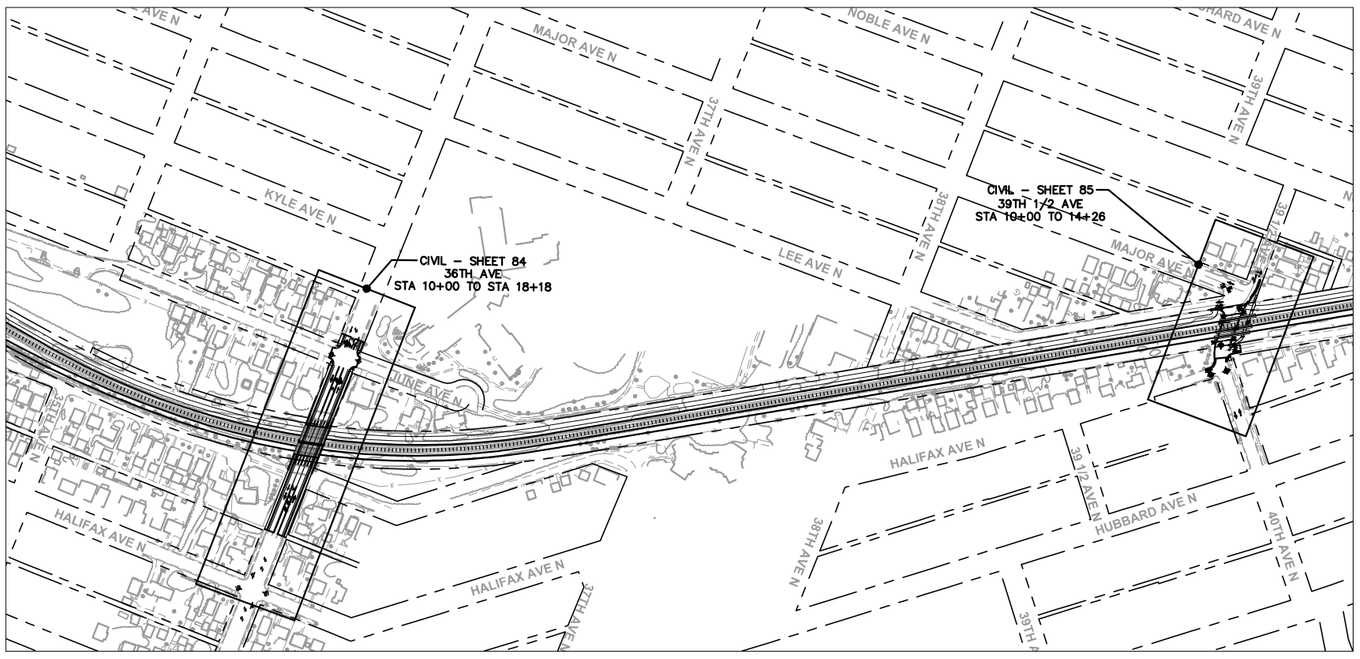
HORIZONTAL
SCALE IN FEET



SEE ABOVE

SEE SHEET 80

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

SRF Consulting Group, Inc. — Engineers Planners Designers

ISTHMUS engineering, inc.

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bottineau LRT

METROPOLITAN COUNCIL

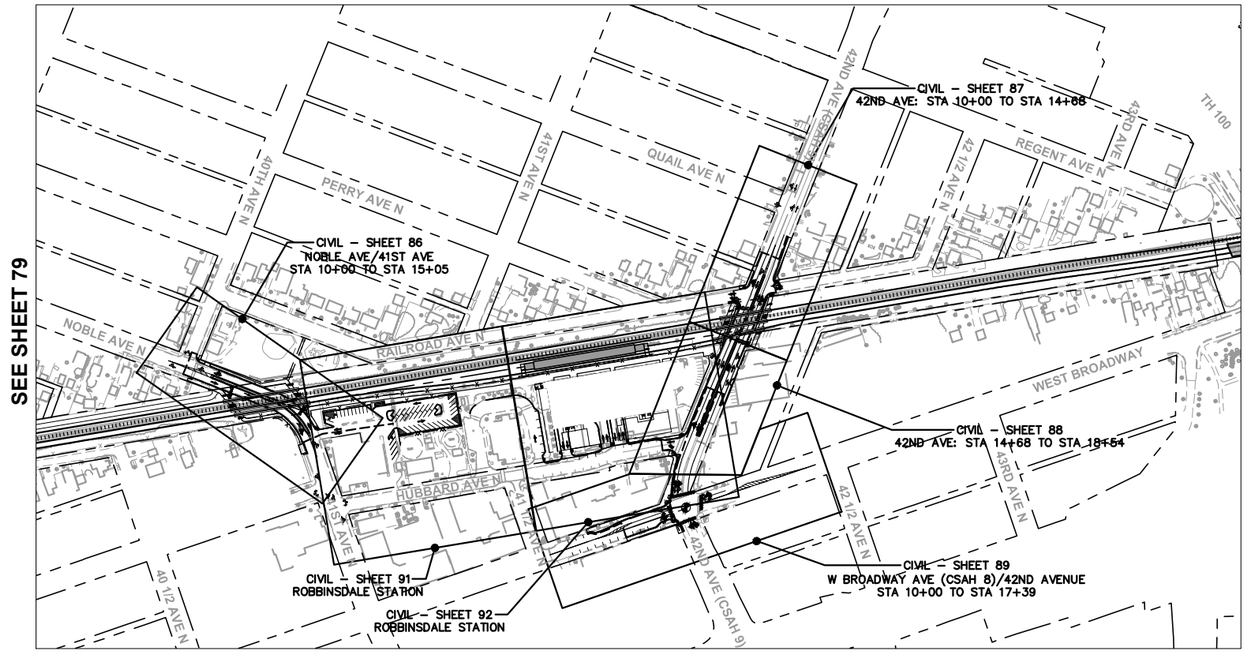
SEGMENT R
CIVIL
SHEET LAYOUT INDEX

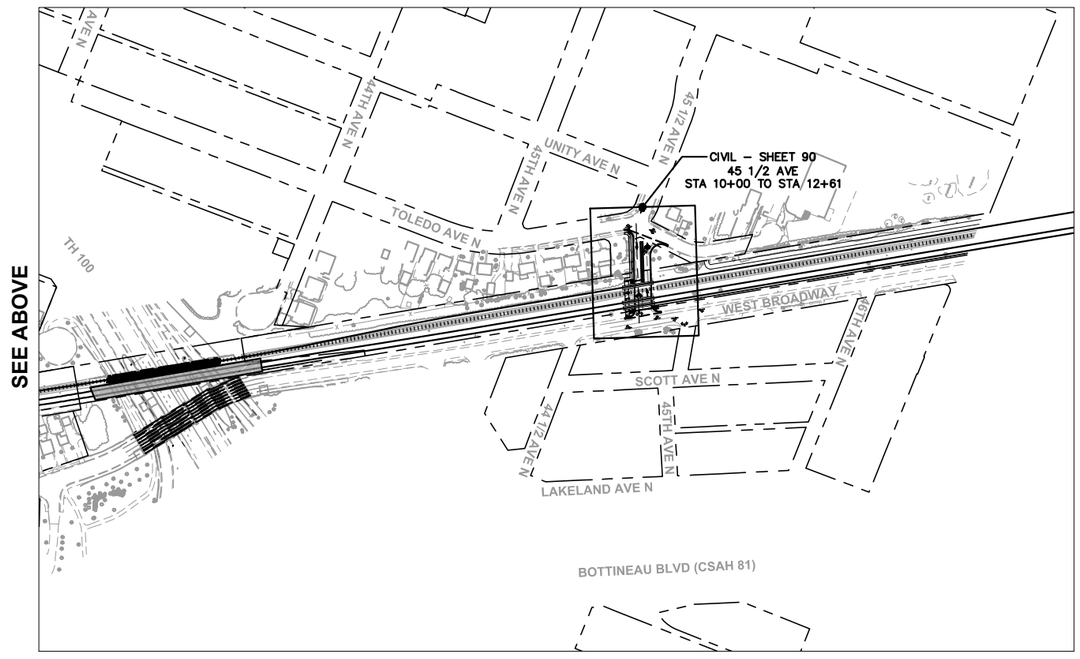
DISCIPLINE: CIVIL

SHEET NAME: R-CIV-IDX-001

SHEET 79 OF 93

Dec, 03 2015 05:12 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-IDX.dwg By: V-NelsonHA





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HORIZONTAL
SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
SRF Consulting Group, Inc. ENGINEERS PLANNERS DESIGNERS
ISTHMUS engineering, inc.
MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

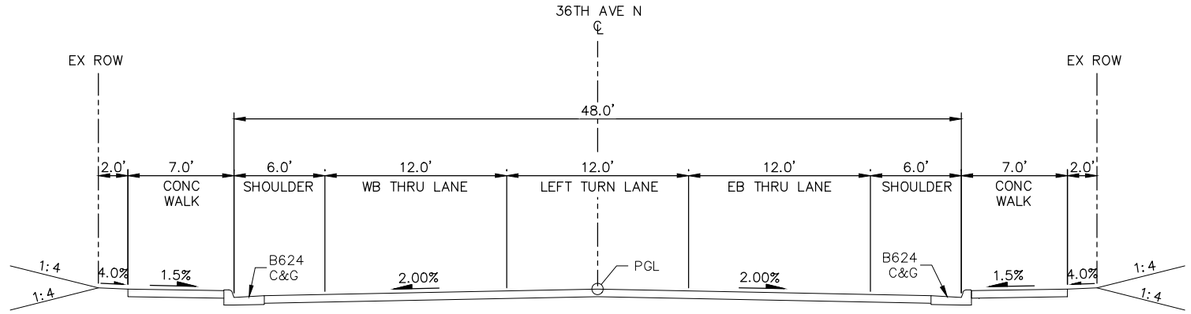
SEGMENT R
CIVIL
SHEET LAYOUT INDEX

DISCIPLINE: CIVIL
SHEET NAME: R-CIV-IDX-002

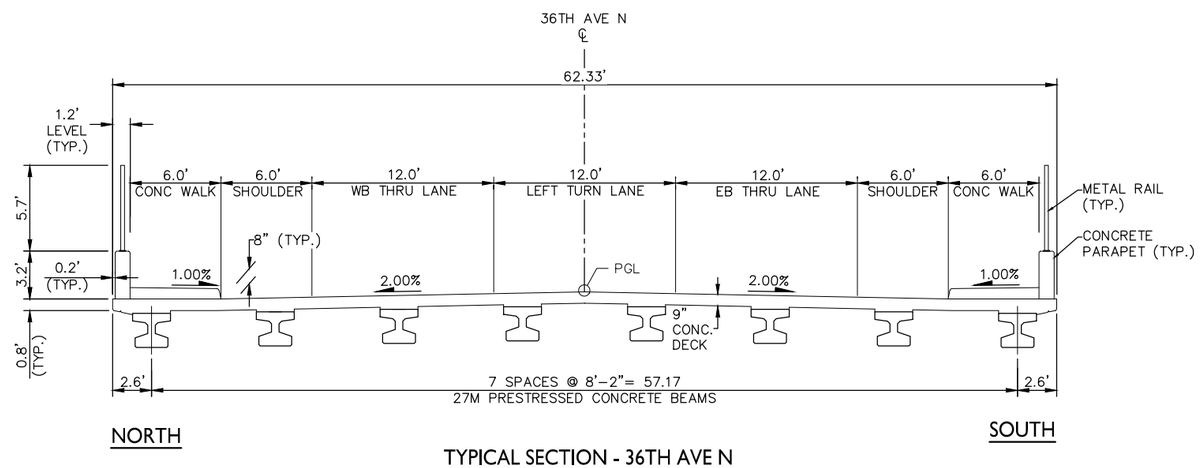
SHEET 80 OF 93

Dec, 03 2015 05:12 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-IDX.dwg By: V-NelsonHA

NOTES:
1. SLOPES LISTED ARE V:H



TYPICAL SECTION - 36TH AVE N
STA 10+99 TO STA 13+51
STA 14+35 TO STA 16+55



TYPICAL SECTION - 36TH AVE N
PROPOSED 36TH AVE N BRIDGE
STA 13+51 TO STA 14+35

0 2.5 5 10
SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
SRF Consulting Group, Inc. ENGINEERS PLANNERS DESIGNERS
ISTHMUS engineering, inc.
MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

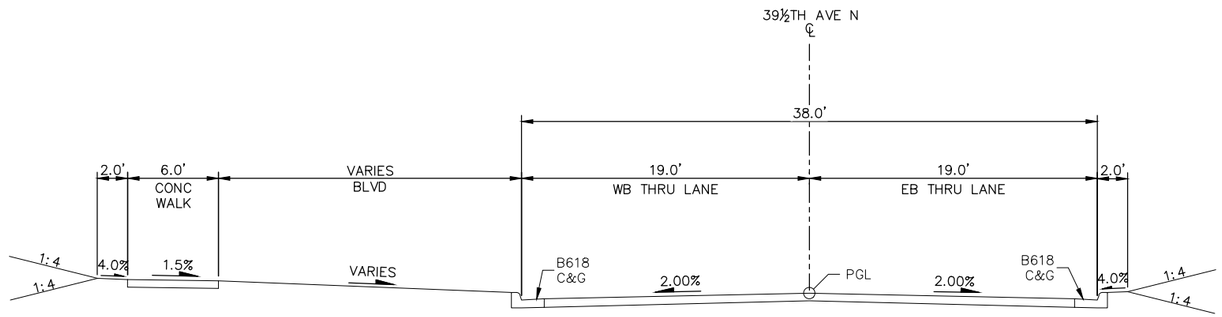
SEGMENT R
CIVIL
TYPICAL SECTIONS

DISCIPLINE: CIVIL
SHEET NAME: R-CIV-TYP-001

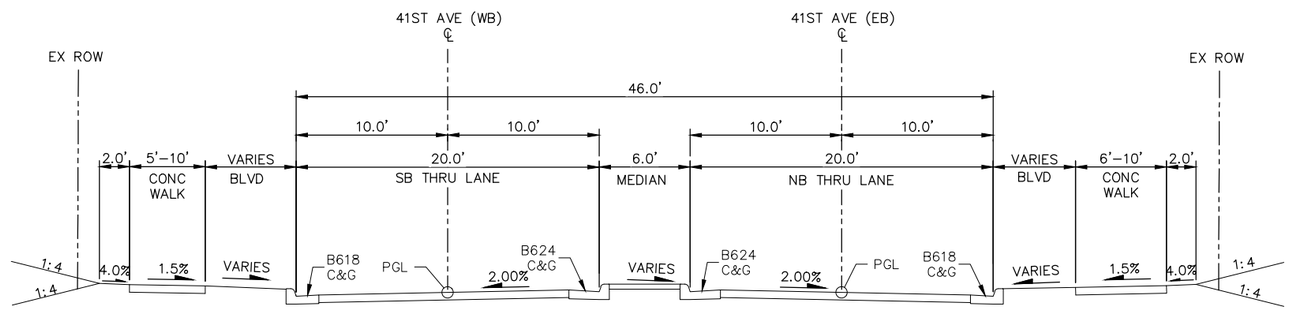
SHEET 81 OF 93

Dec, 04 2015 08:50 am H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-TYP.dwg By: V-NelsonHA

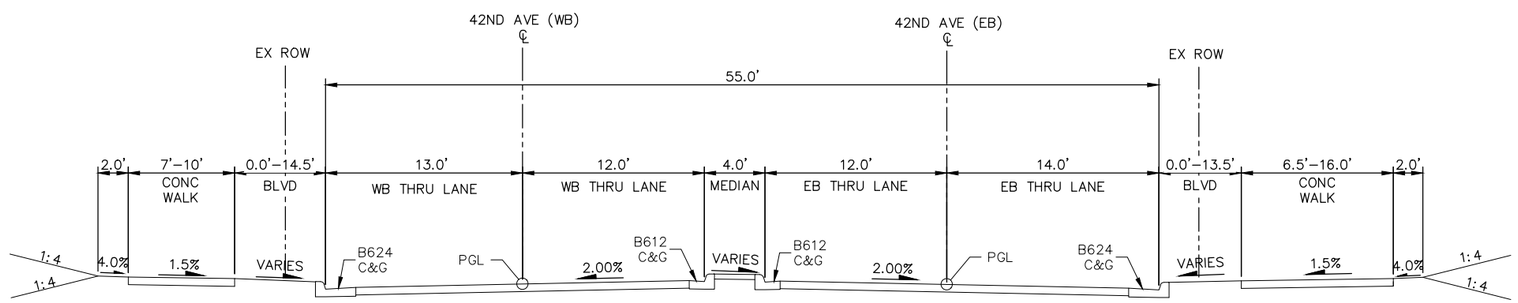
NOTES:
1. SLOPES LISTED ARE V:H
2. STA 11+46 TO STA 12+91 EXISTING RIGHT-OF-WAY IS LOCATED OUTSIDE OF THE EXTENTS OF THE TYPICAL SECTION



TYPICAL SECTION - 39½ TH AVE N
STA 11+46 TO STA 12+91



TYPICAL SECTION - 41ST AVE N
STA 10+63 TO STA 14+45



TYPICAL SECTION - 42ND AVE (CSAH 9)
STA 12+42 TO STA 16+12

0 2.5 5 10
SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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ISTHMUS engineering, inc.
MUNICIPAL CONSENT

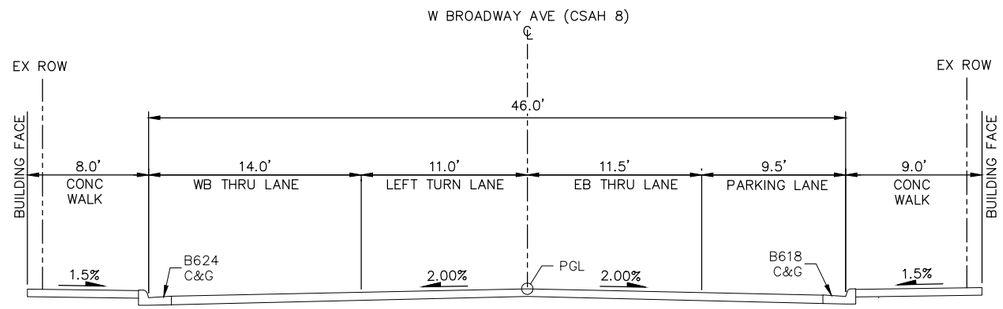
METRO BLUE LINE EXTENSION — Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
CIVIL
TYPICAL SECTIONS

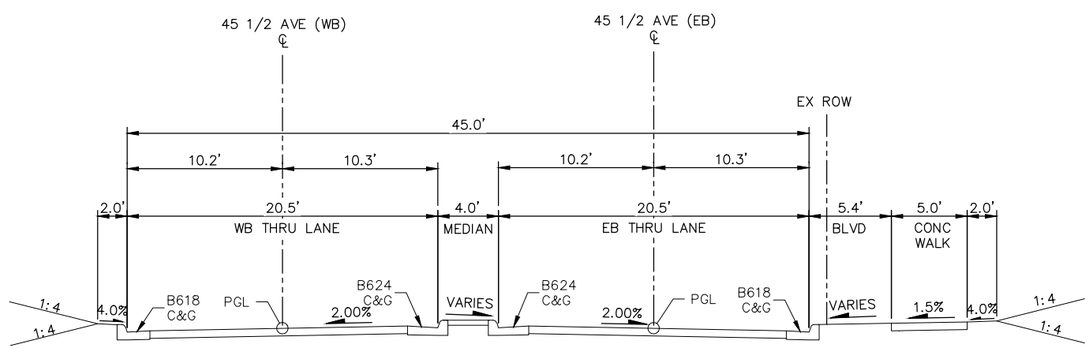
DISCIPLINE: CIVIL
SHEET NAME: R-CIV-TYP-002

Dec, 03 2015 05:13 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-TYP.dwg By: V-NelsonHA

NOTES:
1. SLOPES LISTED ARE V:H
2. STA 10+30 TO STA 12+45 EXISTING RIGHT-OF-WAY IS LOCATED OUTSIDE OF THE EXTENTS OF THE TYPICAL SECTION



TYPICAL SECTION - W BROADWAY AVE (CSAH 8)
STA 12+05 TO STA 13+43



TYPICAL SECTION - 45½ AVE N
STA 10+30 TO STA 12+45

0 2.5 5 10
SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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ISTHMUS engineering, inc.
MUNICIPAL CONSENT

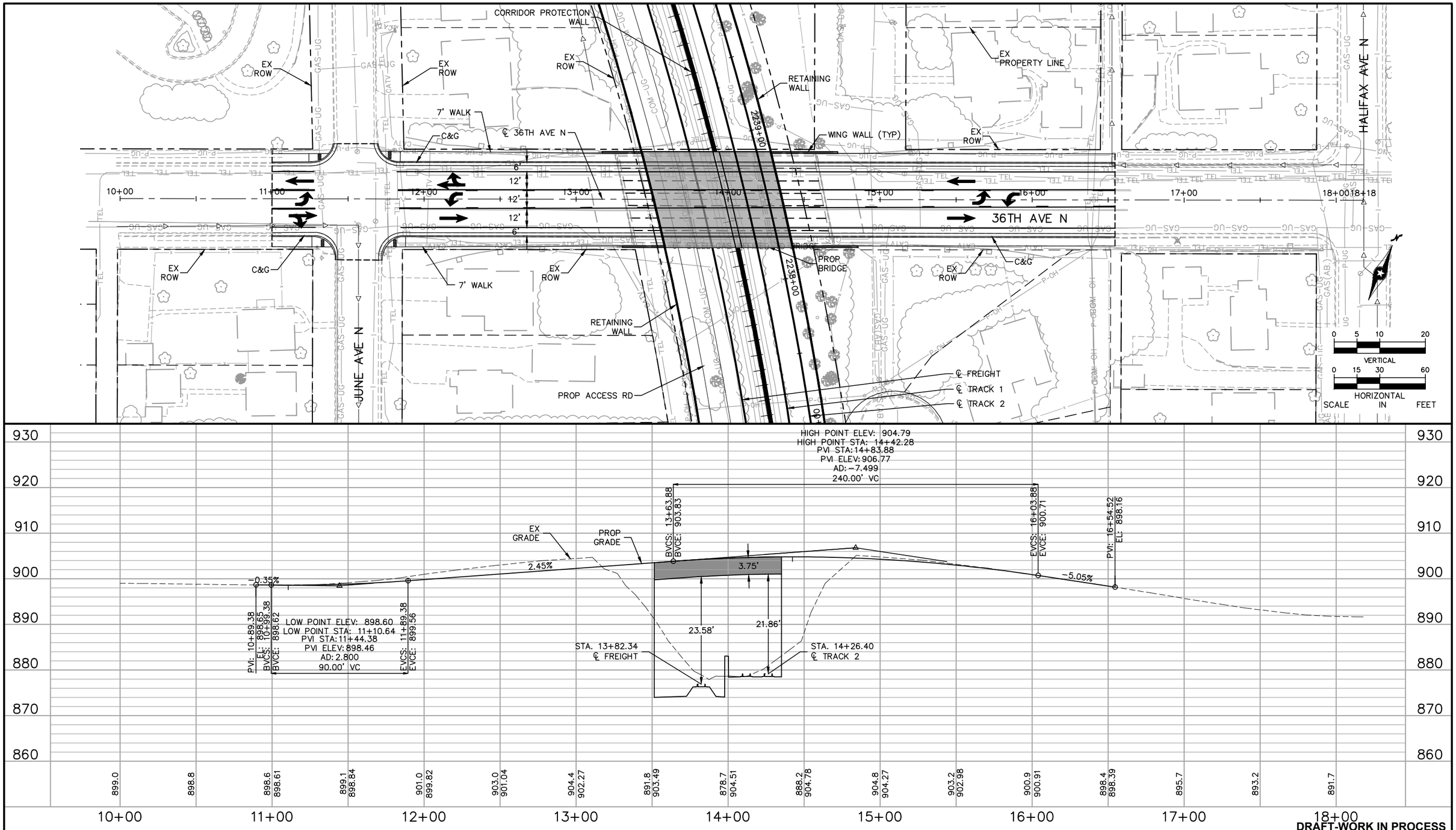
METRO BLUE LINE EXTENSION Bottineau LRT
METROPOLITAN COUNCIL

SEGMENT R
CIVIL
TYPICAL SECTIONS

DISCIPLINE: CIVIL
SHEET NAME: R-CIV-TYP-003

SHEET 83 OF 93

Dec, 03 2015 05:13 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-TYP.dwg By: V-NelsonHA



DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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ISTHMUS engineering, inc.

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

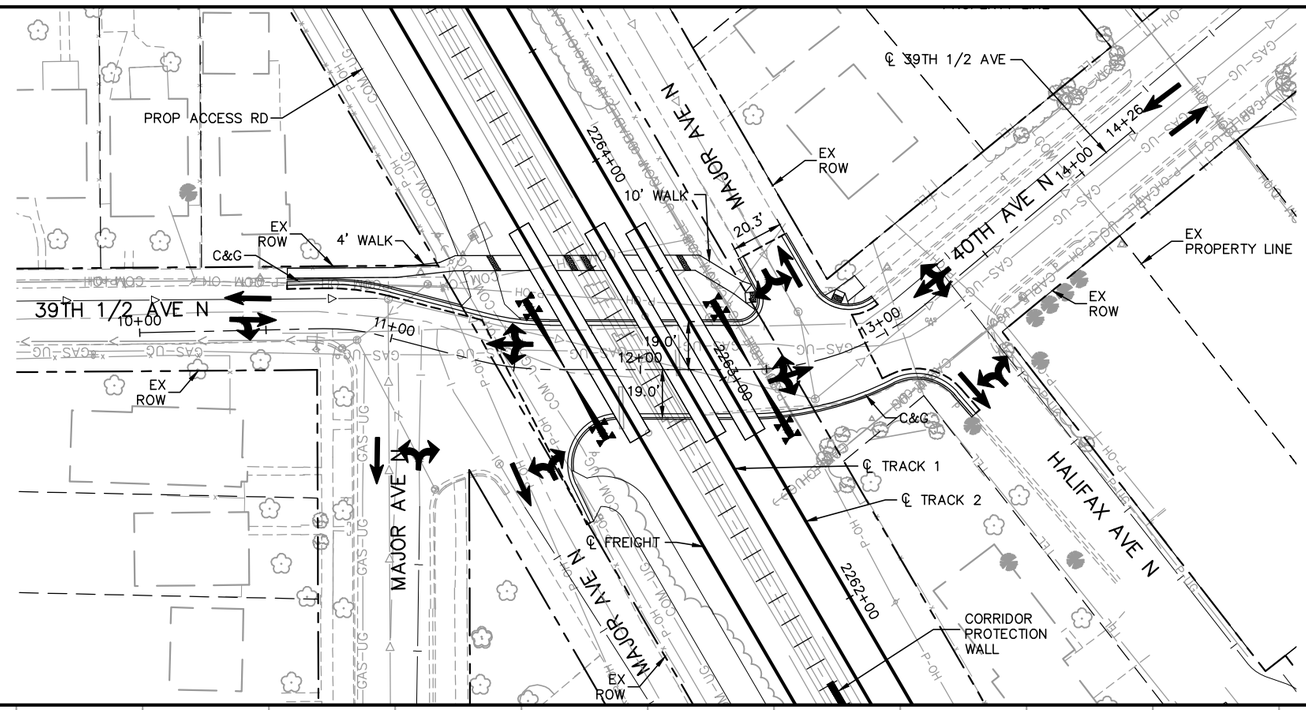
SEGMENT R
36TH AVE N
PLAN AND PROFILE
STA 10+00 TO STA 18+18

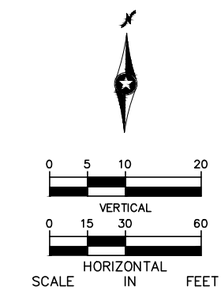
DISCIPLINE: CIVIL

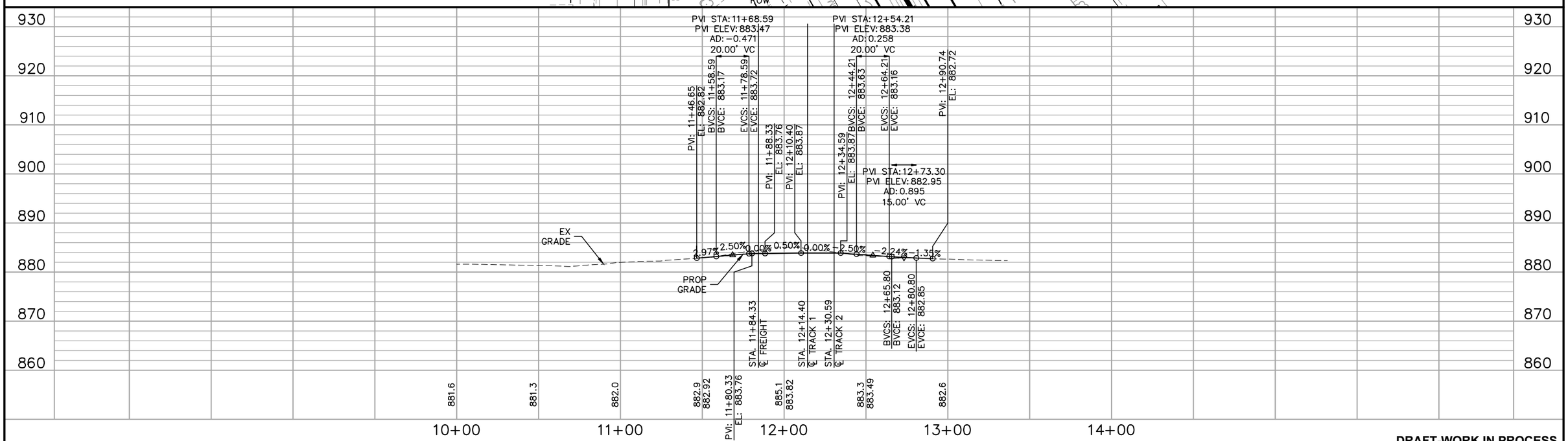
SHEET NAME: R-CIV-PPFL-001

SHEET 84 OF 93

Dec, 03 2015 06:11 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA







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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

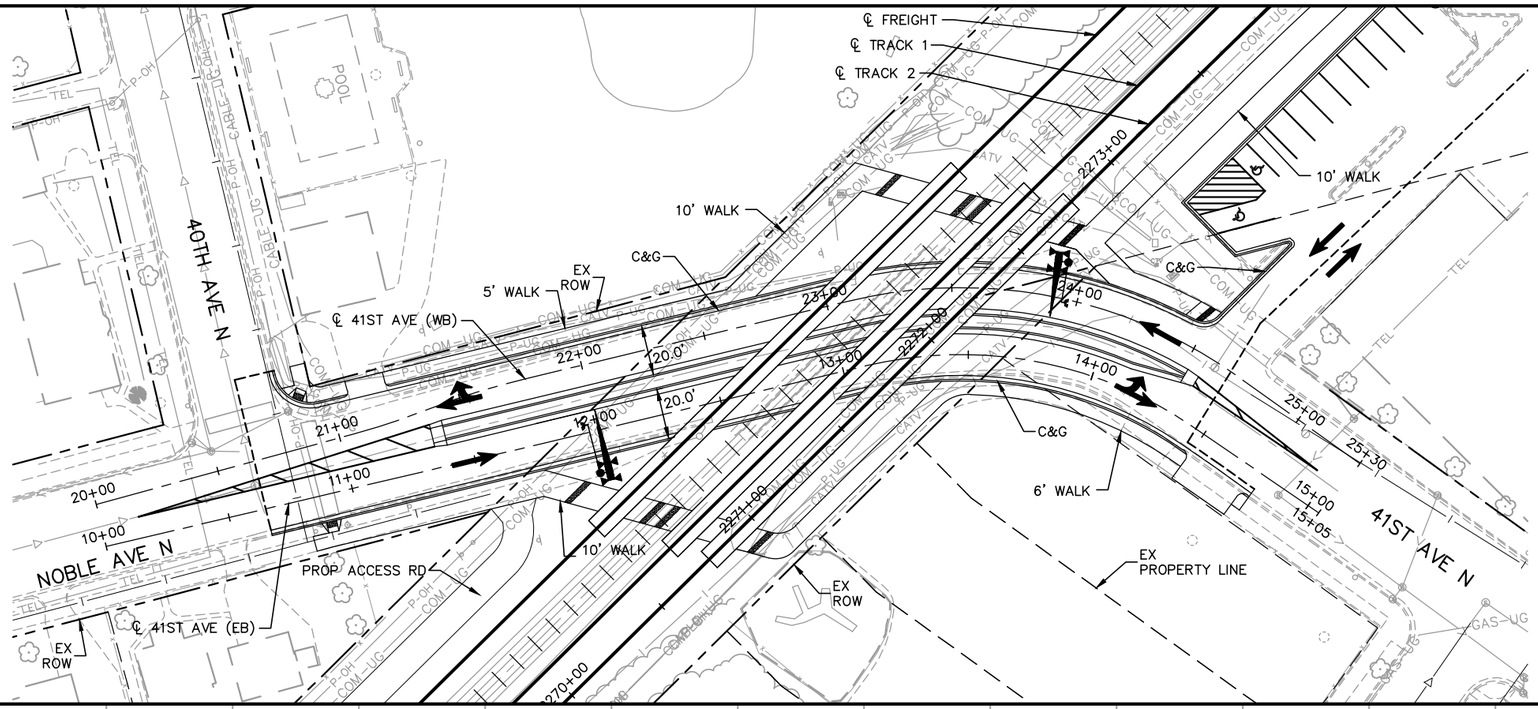
SEGMENT R
39TH 1/2 AVE N
PLAN AND PROFILE
STA 10+00 TO STA 14+26

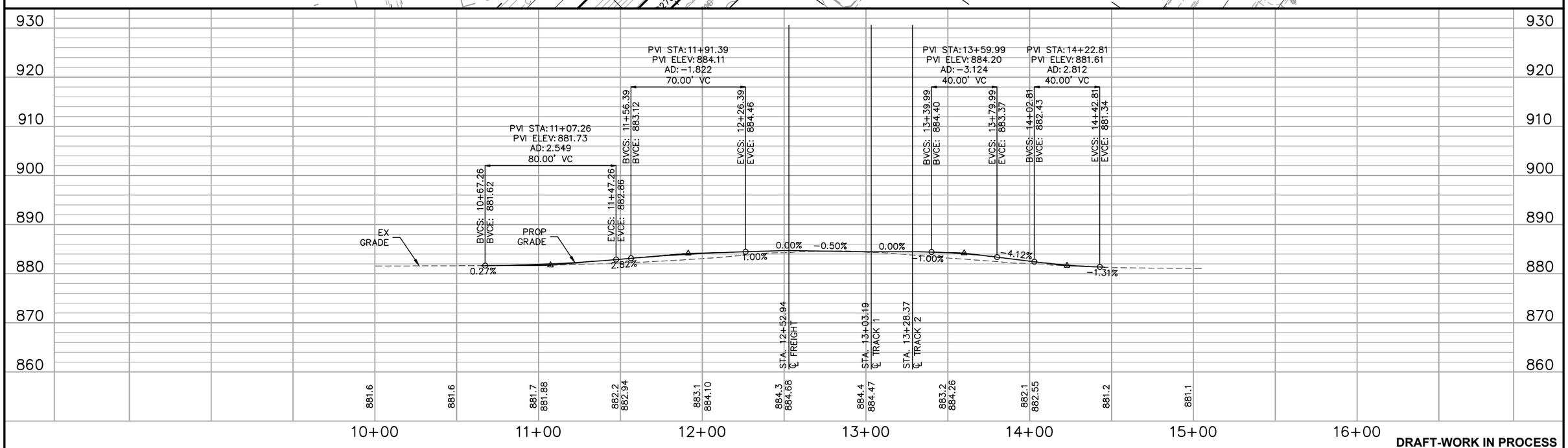
DISCIPLINE: CIVIL

SHEET NAME: R-CIV-PPFL-002

SHEET 85 OF 93

Dec, 03 2015 06:13 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA





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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bottineau LRT

METROPOLITAN COUNCIL

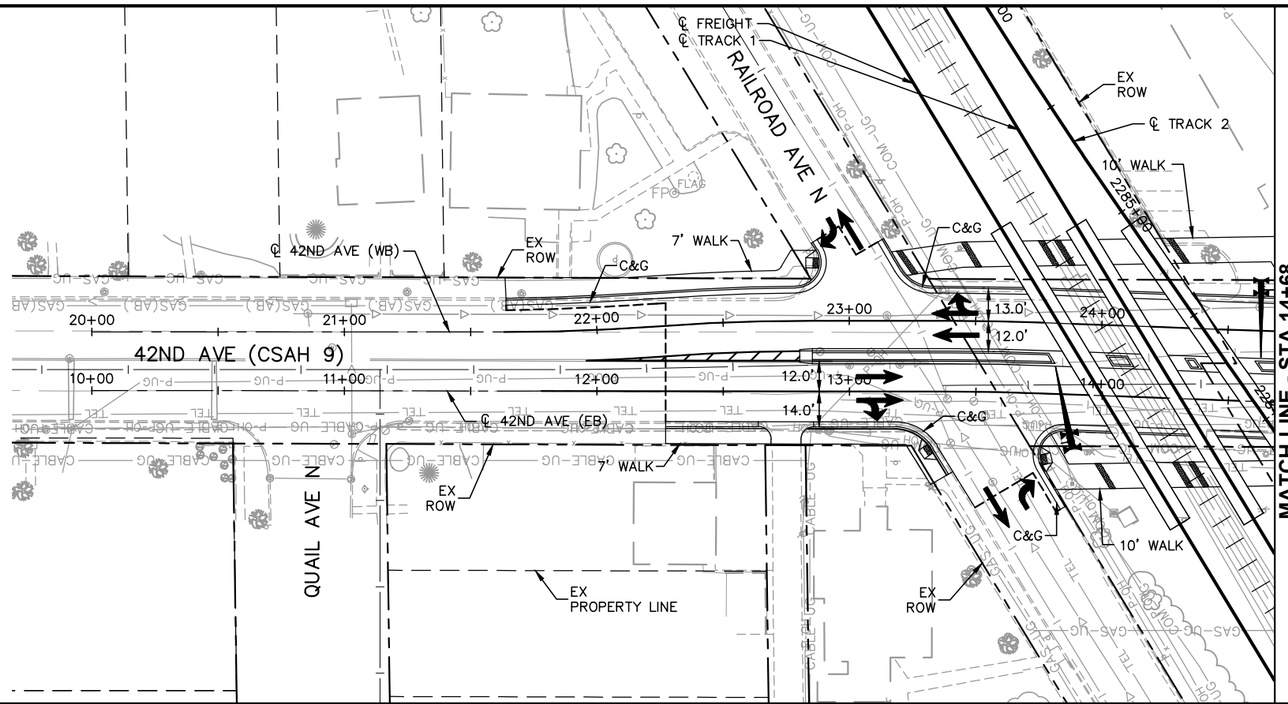
SEGMENT R
NOBLE AVE N / 41ST AVE N
PLAN AND PROFILE
STA 10+00 TO STA 15+05

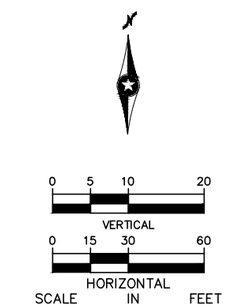
DISCIPLINE: CIVIL

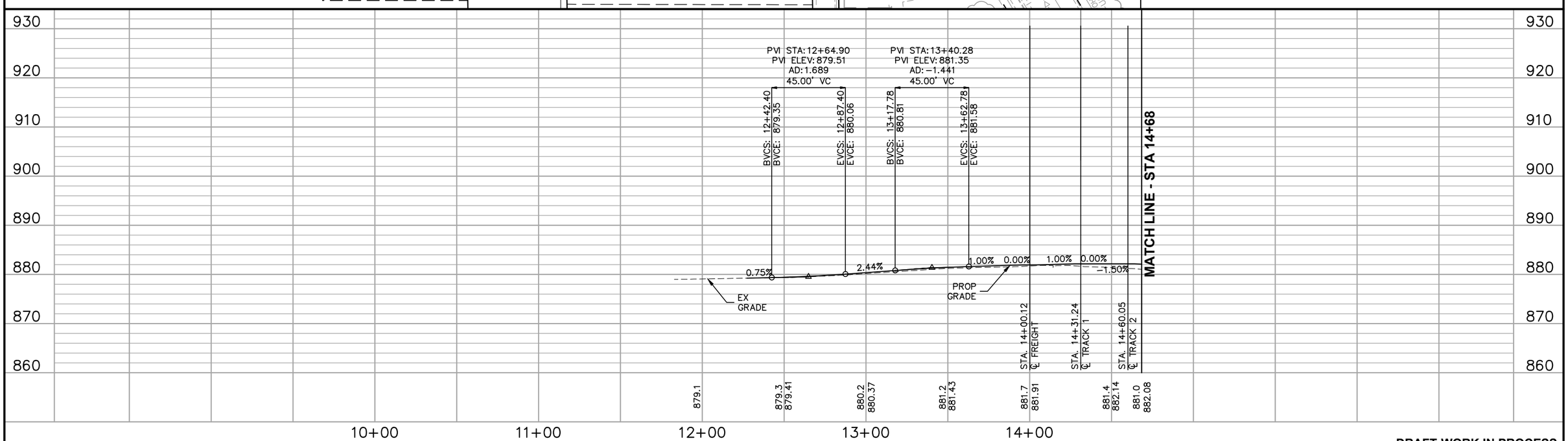
SHEET NAME: R-CIV-PPFL-003

SHEET 86 OF 93

Dec, 03 2015 06:14 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA







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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bassett Creek LRT

METROPOLITAN COUNCIL

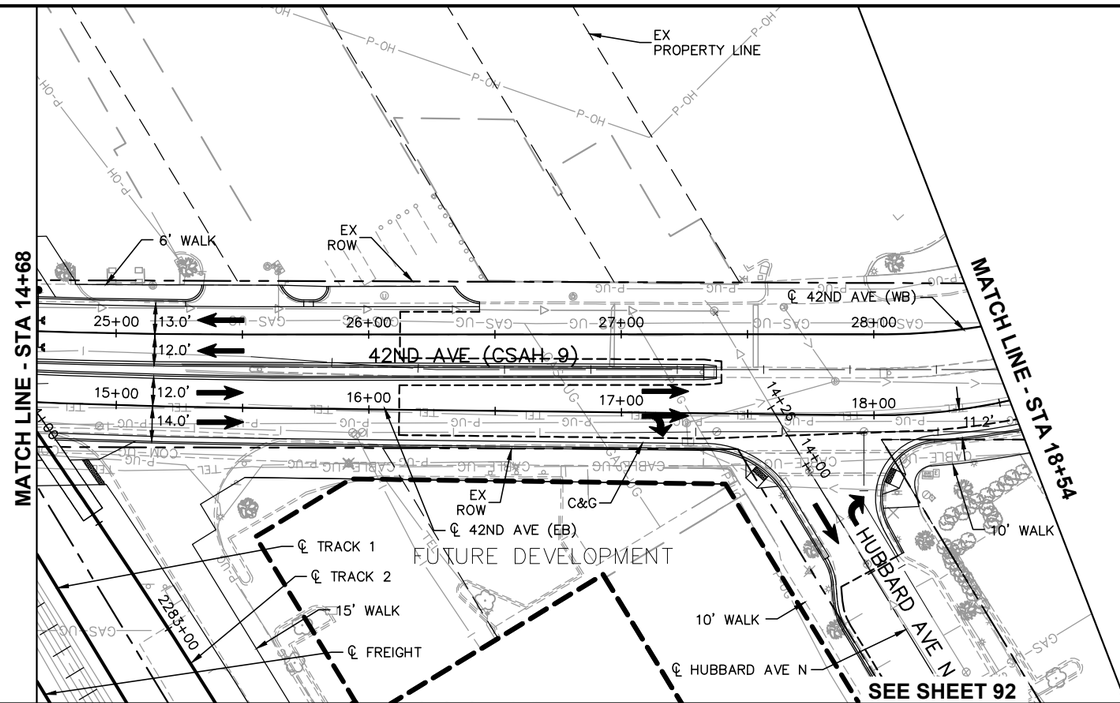
SEGMENT R
42ND AVE N
PLAN AND PROFILE
STA 10+00 TO STA 14+68

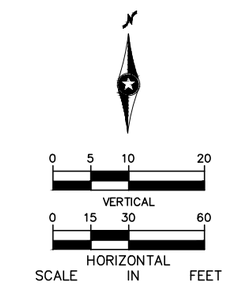
DISCIPLINE: CIVIL

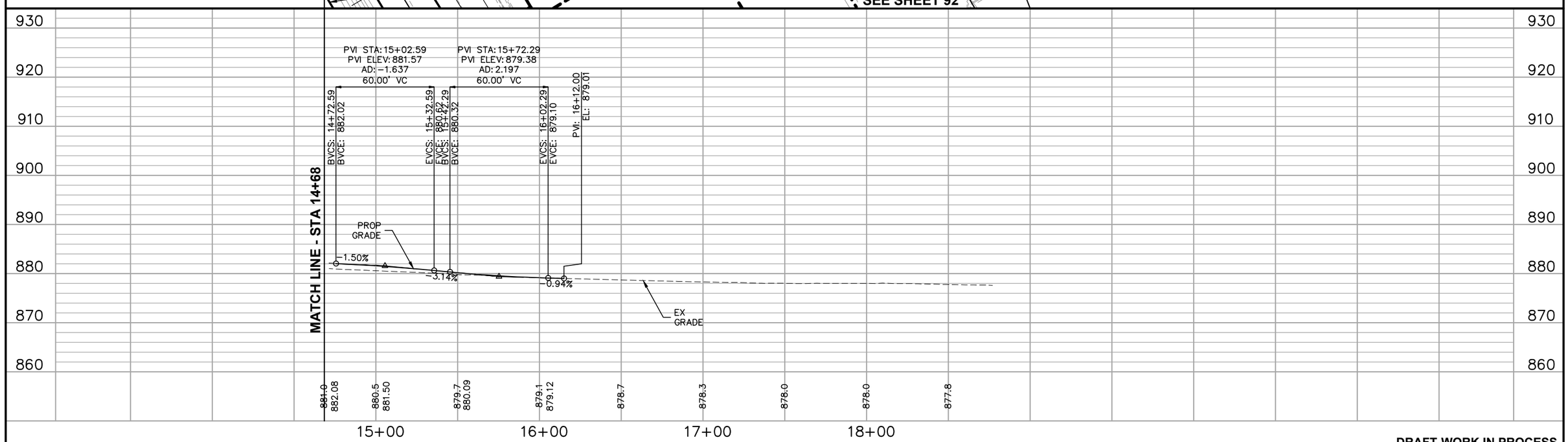
SHEET NAME: R-CIV-PPFL-004

SHEET 87 OF 93

Dec, 03 2015 06:15 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA







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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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ISTHMUS engineering, inc.

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
42ND AVE N
PLAN AND PROFILE
STA 14+68 TO STA 18+54

DISCIPLINE: CIVIL

SHEET NAME: R-CIV-PPFL-005

SHEET 88 OF 93

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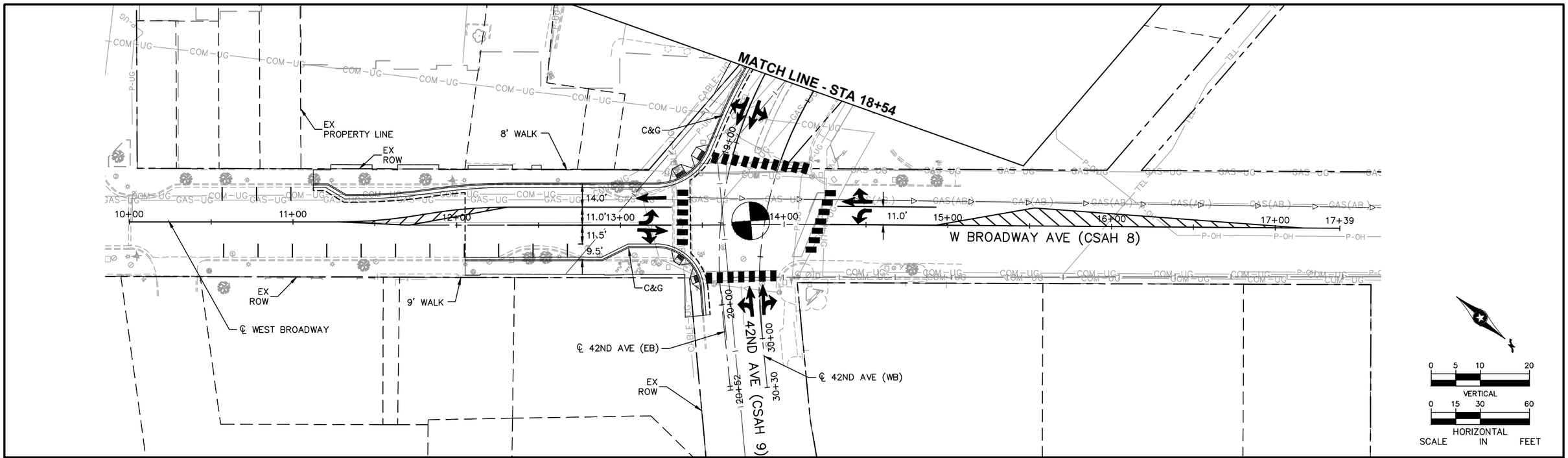

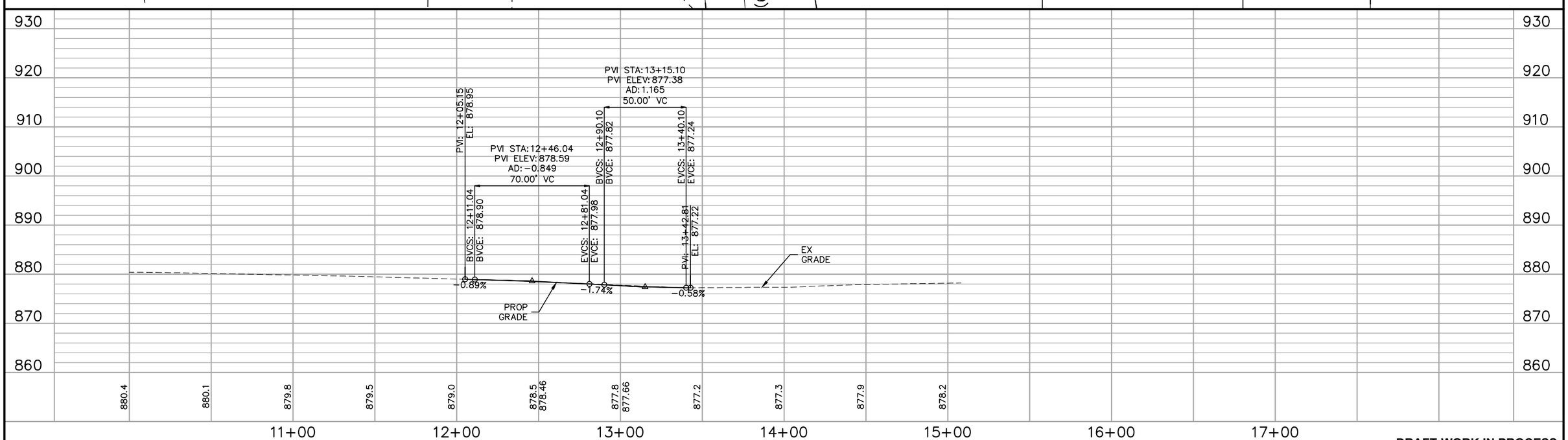

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bottineau LRT

METROPOLITAN COUNCIL

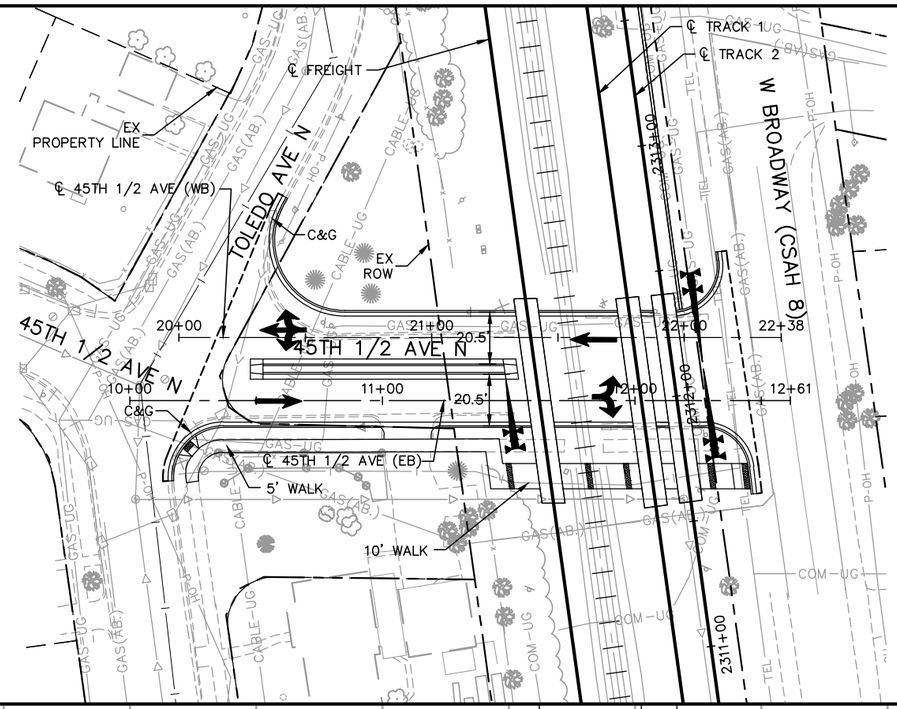
SEGMENT R
W BROADWAY (CSAH 8) / 42ND AVE N
PLAN AND PROFILE
STA 10+00 TO STA 17+39

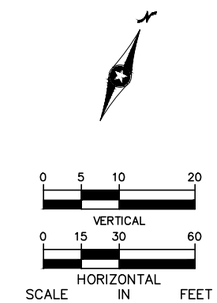
DISCIPLINE: CIVIL

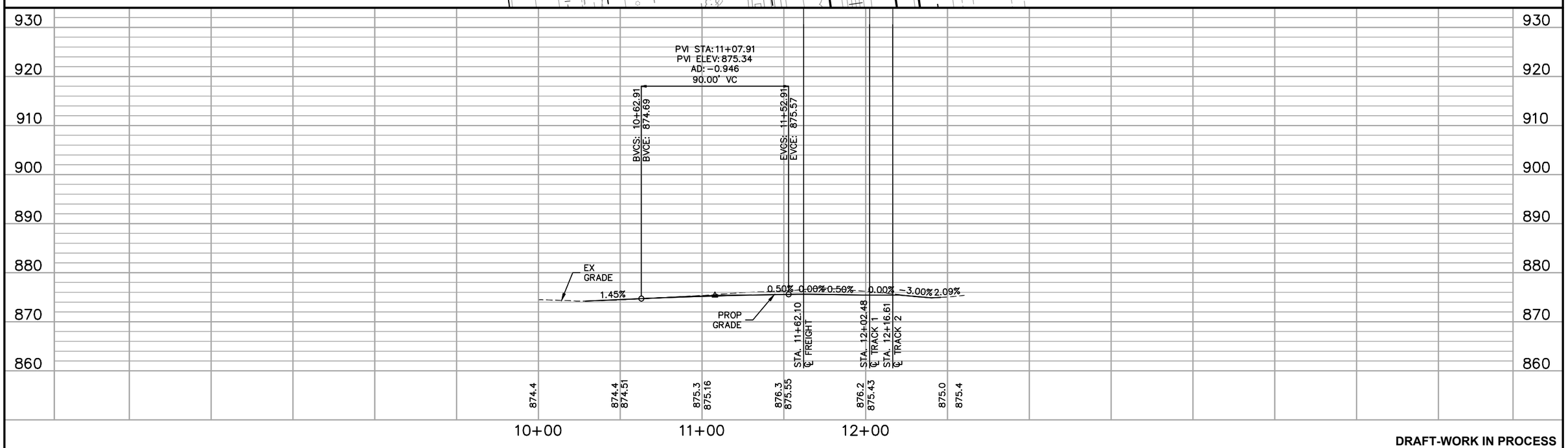
SHEET NAME: R-CIV-PPFL-006

SHEET 89 OF 93

Dec, 03 2015 06:18 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA







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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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ISTHMUS engineering, inc.

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION — Bottineau LRT

METROPOLITAN COUNCIL

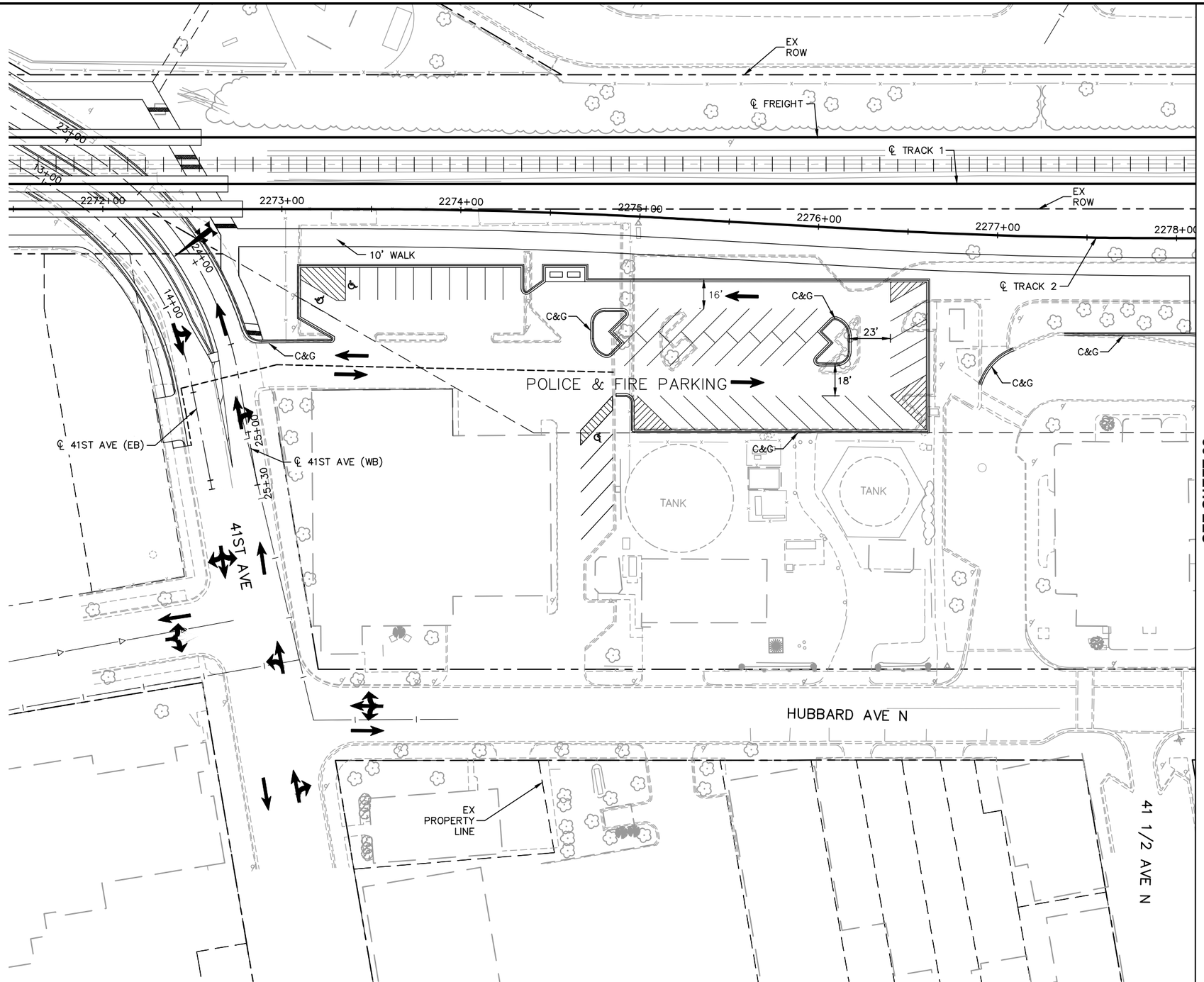
SEGMENT R
45TH 1/2 AVE N
PLAN AND PROFILE
STA 10+00 TO STA 12+61

DISCIPLINE: CIVIL

SHEET NAME: R-CIV-PPFL-007

SHEET 90 OF 93

Dec, 03 2015 06:20 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PPFL.dwg By: V-NelsonHA



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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn

SRF Consulting Group, Inc. ENGINEERS PLANNERS DESIGNERS

ISTHMUS engineering, inc.

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R
ROBBINSDALE STATION
SITE PLAN SOUTH

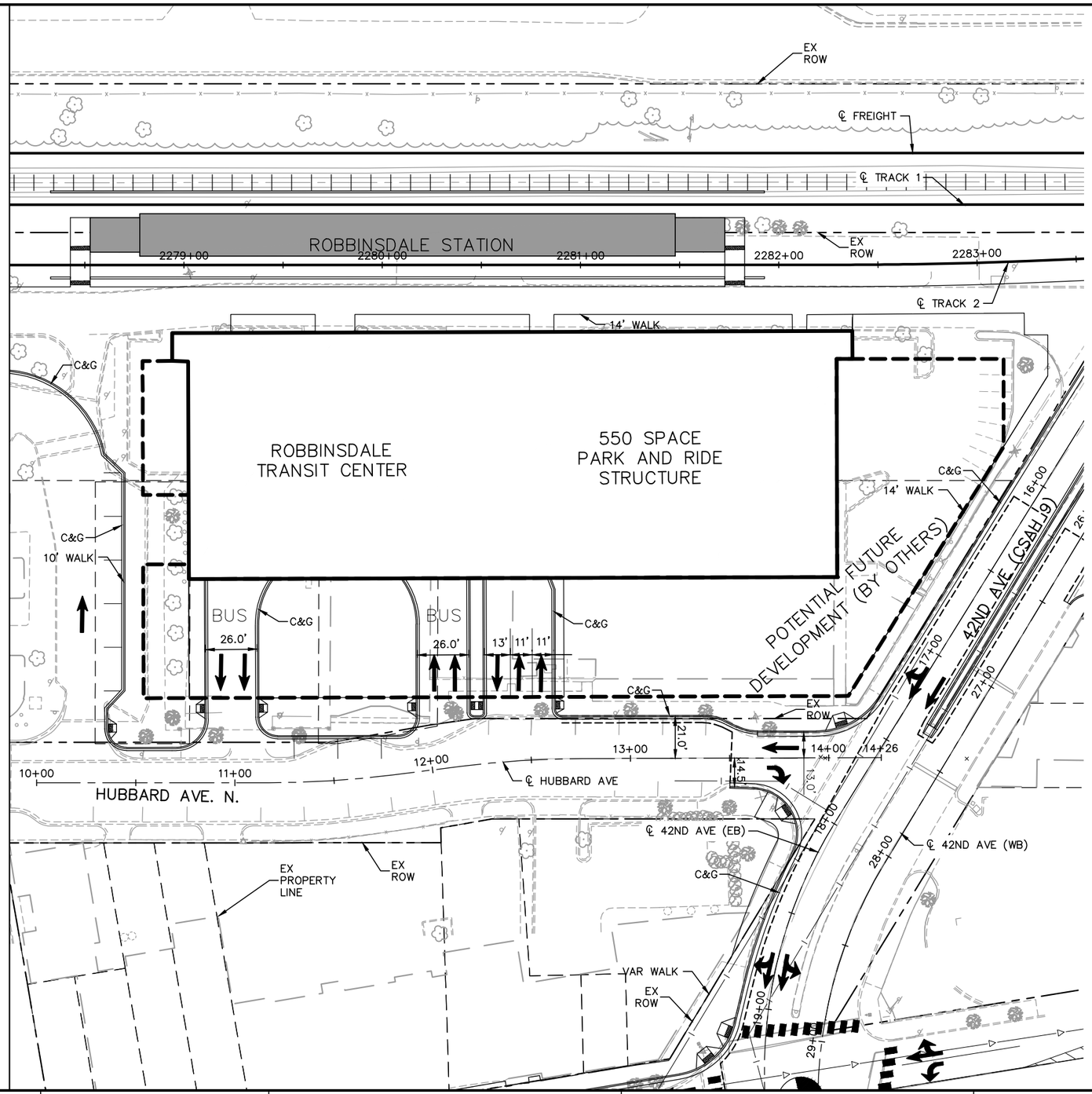
DISCIPLINE: CIVIL

SHEET NAME: R-CIV-PLN-001

SHEET 91 OF 93

Dec, 03 2015 05:48 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PLN.dwg By: V-MuelleAL

NOTES:
1. 550 PROVIDED PARKING STALLS
550 REQUIRED PARKING STALLS



SEE SHEET 91

0 15 30 60
HORIZONTAL SCALE IN FEET

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

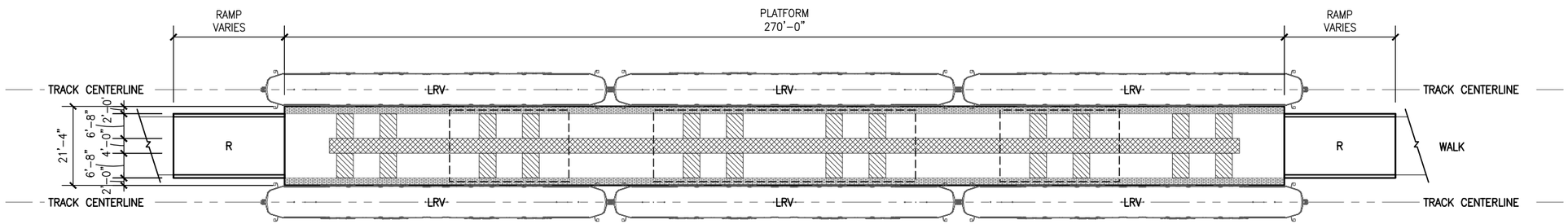
SEGMENT R
ROBBINSDALE STATION
SITE PLAN NORTH

DISCIPLINE: CIVIL

SHEET NAME: R-CIV-PLN-002

SHEET 92 OF 93

Dec. 03 2015 05:48 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\CIVIL\R-CIV-PLN.dwg By: V-MuelleAL



STATION PLATFORM ELEMENTS:

R — APPROACH RAMPS
- LESS THAN 5% SLOPE
- HAND RAIL ON BOTH SIDES

PATRON CIRCULATION ZONE
- CLEAR OF OBSTRUCTIONS
- WIDE ENOUGH TO ALLOW COMFORTABLE PASSAGE OF TWO PEOPLE

TRAIN LOADING AND UNLOADING ZONE
- AREAS WHERE TRAIN DOORS ARE LOCATED WHEN LRV IS AT STATION PLATFORM

PATRON WAITING AREA AND STRUCTURE ZONE
- FARE COLLECTION EQUIPMENT
- COMMUNICATIONS AND ELECTRICAL EQUIPMENT
- INFORMATION KIOSKS
- TRASH CANS
- SIGNAGE

POTENTIAL SHELTER AND CANOPY STRUCTURE
- COVERED WINDSCREEN/SHELTER AREAS WITH BENCHES AND LEAN RAILS
- PROTECTION AT BOARDING AREAS

BOARDING EDGE
- ADA DETECTABLE WARNING AT EDGE OF PLATFORM

DRAFT-WORK IN PROCESS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

Kimley»Horn
miller dunwiddie
ARCHITECTURE

MUNICIPAL CONSENT

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

SEGMENT R

TYPICAL CENTER PLATFORM PLAN

DISCIPLINE: ARCHITECTURE

SHEET NAME: R-ARC-STA-PLN-001

SHEET 93 OF 93

Dec, 07 2015 04:14 pm H:\BPO\550_Design_Consultant\CAD\004-SEGMENT-R\MC\PLAN SHEETS\ARCH\R-ARC-STA-PLN.dwg By: V-MuelleAL